Substance Abuse Prevention and Disability

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RISK FACTORS FOR SUBSTANCE ABUSE IN THE DISABLED

- Prescribed medications
- Isolation
- Chronic Medical Problems
- Co-existing behavioral problems
- Lack of recreational alternatives
- Disenfranchisement

Disability Groups

- Spinal Cord Injury (SCI)
- Traumatic Brain Injury (TBI)
  - Cognitive Disability
- Chronic Pain
  - Spine pain
  - Reflex Sympathetic Dystrophy

Spinal Cord Injury

- A lesion that may involve complete or incomplete disruption of the spinal cord
- Permanent motor disability
- Paraplegia or quadriplegia
- Varying degrees of motor and sensory deficits
- Organ retraining and daily management

Spinal Cord


Levels of Injury and Extent of Paralysis
C4 injury (quadriplegia)
C6 injury (quadriplegia)
T6 injury (paraplegia)
L1 injury (paraplegia)
Cervical (neck)
Thoracic (upper back)
Lumbar (lower back)
Sacral
Coccygeal

Spinal Cord Injury

- 50% due to MVA's or MCA's
- 20% due to falls
- 15% due to drug and alcohol related violence
- Recent research has indicated that 62% of acute SCI's had a positive tox screen

Spinal Cord Injury

- Alcohol was the most frequently found substance (40%)
- Cocaine (14%)
- Cannabinoids (8%)
- Benzodiazepines (5%)
- Opiates (4%)

Spinal Cord Injury

- 68% of SCI patients return to drinking alcohol after hospitalization
- The rate of moderate to heavy drinking is twice the rate reported by the general population (46% vs. 25%).
- The use of other substances is also higher than the general population

Spinal Cord Injury

- 24% report misusing prescription drugs
- Individuals who regularly used prescription medications were less accepting of their disability and more depressed
- This was also true of individuals who were abusing substances

Spinal Cord Injury

- In a sample of 86 SCI cases, 70% reported problems related to substance use.
- Only 16% perceived a need for treatment
- Only 7% received treatment

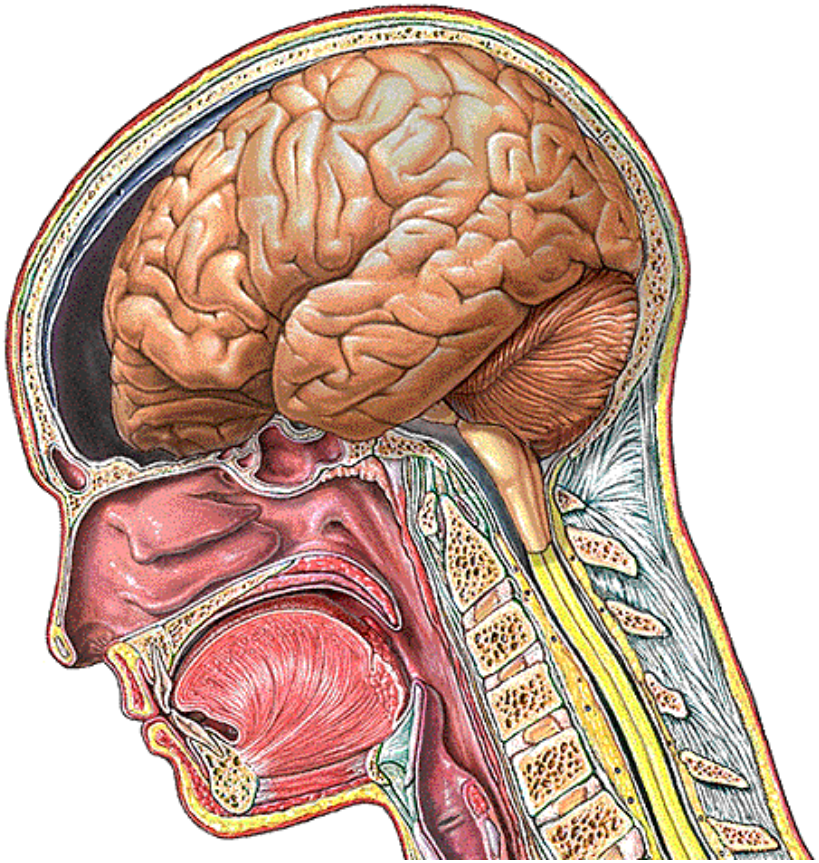
Traumatic Brain Injury (TBI)

- Every 5 minutes one person dies and another is permanently disabled due to TBI
- Total economic cost is $25 billion per year
- Incidence of TBI requiring hospitalization is 200/100,000

Traumatic Brain Injury

- MVA's and MCA's are the major contributing factor to TBI
- Falls are the second leading cause of TBI
- Violence is the third leading cause

TBI



Traumatic Brain Injury

- 50 to 70% of TBI's resulting in hospitalization are intoxicated at the time of the injury
- 50% of TBI survivors return to alcohol and/or drug use after the injury

Traumatic Brain Injury

- Focal Injury
- Diffuse Axonal Injury
- Hypoxia/Ischemia
- Secondary Injuries
  - Hydrocephalus
  - Delayed hematoma
  - Cerebral Edema

Mild TBI

- Momentary loss of consciousness
- Hospitalization is not necessary
- Diagnosis of concussion
- Post concussion syndrome
  - Nausea/vomiting
  - Dizziness
  - Headache
  - Cognitive changes

Cognitive Disability

- Cognitive Functioning
  - Attention/concentration
  - Learning/memory
  - Language
  - Visuoperceptual skills
  - Executive Function/Reasoning

Cognitive Disability and TBI

- Deficits in Attention/Concentration
- Deficits in Learning/Memory
- Deficits in Executive Function
- Intellect is intact
- Language is intact
- Visuoperceptual Skills are intact

Rehabilitation and TBI

- Moderate to Severe TBI
  - Inpatient rehabilitation
  - Outpatient rehabilitation
  - 24 month process
  - Permanent disabilities
- Mild TBI
  - Outpatient cognitive rehabilitation
  - Psychotherapy

Substance Abuse and TBI

- Treating Substance Abuse is difficult due to the cognitive deficits
- Modifications in standard treatment methods need to be made
- Prevention and secondary prevention is critical early in the rehabilitation process

Pain: Good and Evil

- Pain occurs before serious injury
  - Survival value--withdraw
- Basis for learning
  - Avoid similar circumstances
- Reduce activity to allow for recovery
  - Enforce inactivity and rest
  - Joint pain, abdominal infections, inflammation

Perceiving Pain

- Algogenic substances – chemicals released at the site of the injury
- Nociceptors – afferent neurons that carry pain messages
- Referred pain – pain that is perceived as if it were coming from somewhere else in the body

Psychology of Pain

- Pain is variable
- Pain is modifiable
- Pain differs from person to person
- Pain differs from culture to culture
- Pain is a highly personal experience
- Pain cannot be defined simply in terms of particular kinds of pain

Cultural Determinants

- Hook hanging ritual in India
- Trepanation
- Stoicism
- Affective response

Pain Thresholds

- Four Thresholds
  - Sensation Threshold
  - Pain Perception Threshold
  - Pain Tolerance (upper threshold)
  - Encouraged Pain Tolerance

Sensation Threshold

- No cultural differences all people are the same
- Determined by using electric shock or radiant heat.

Pain Perception Threshold

- Cultural background has a powerful effect on the Pain Perception Threshold
- Studies of Mediterranean people vs. Northern European people

Pain Tolerance Levels

- Most striking effect of cultural background
- Ethnic attitudes toward pain
  - Old Americans withdraw and moan in private
  - Jews and Italians are more vociferous in their complaints and openly seek sympathy and support

Past Experience

- Children are deeply influenced by the attitude of their parents toward pain.
- Experiments with dogs raised in isolation.
- The significance or meaning of environmental stimuli acquired during early experience plays an important role in pain perception

Meaning of the situation

- People attach variable meaning to pain-producing situations and the meaning greatly influences the degree and quality of pain they feel.
- Soldiers taken to the hospital after a wound request less morphine
- Stomach cramps are ignored when attributed to gas but focused on when told a friend has stomach cancer
- Pain is less tolerable when help does not appear to be readily available. Dentist example.

Attention, Anxiety, Distraction

- Attention focused on a potentially painful experience will tend to perceive more pain
- Anticipation of pain increases sensitivity
- Distraction away from pain can diminish or abolish pain

Feelings of control over pain

- The severity of post-surgical pain is significantly reduced when taught coping strategies prior to surgery.
- Knowledge alone is not enough and may actually worsen the situation.
- Actual coping skills must be taught
  - Relaxation or distraction strategies

Suggestion and placebos

- Severe pain in post-surgical patients can be relieved with a placebo.
- Placebos reduced anxiety because the perception is that something is being done
- Placebos have about a 50% level of effectiveness
- Experimenter expectations are present even in double-blind studies
- Large individual differences in the impact of placebos.

Psychogenic Pain

- Addiction to multiple surgical procedures
- “Career patients”
- Not malingering—pain is measurable but has high psychological value

Varieties of Pain

Transient Pain

Acute Pain

Chronic Pain

Acute Pain

- Combination of tissue damage, pain and anxiety
- Anxiety is aimed in three directions: past, present and future
- Past: the cause of the pain
- Present: the treatment process
- Future: Recovery

Chronic Pain

- Pain persists long after healing has occurred and/or long after pain can serve a useful purpose
- No longer a symptom of injury or disease.
- A medical problem or syndrome in its own right.

Chronic Pain

- Pain, which is normally associated with the search for treatment and optimal conditions for recovery, now becomes intractable.
- Patients are beset with a sense of helplessness, hopelessness and meaninglessness.
- The pain becomes evil—intolerable and serves no useful function

Chronic Pain

- Patient's behavior changes during the months after the onset of pain in the acute stage.
- Pain and complaint are unremitting and often a more and more elaborate search for treatment becomes a major activity.
- Deepening depression

Chronic Pain

- Movement is restricted
- Thought is slow and attention to the outside world is limited
- Loss of appetite, constipation, loss of libido, change of sleep pattern, disturbance of family and social relations.

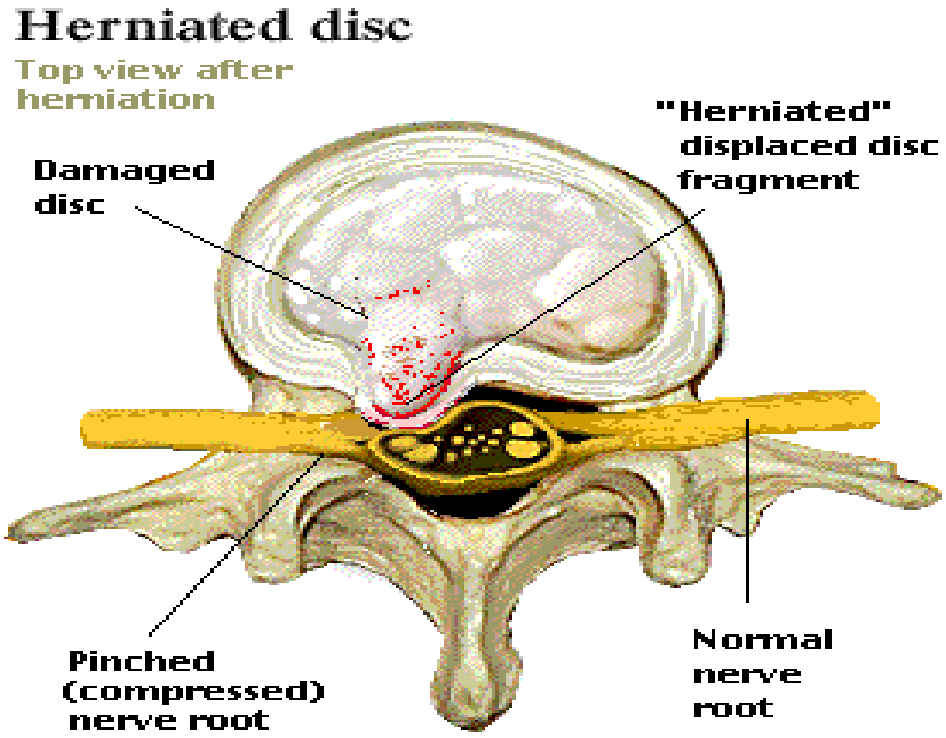
Chronic Pain

- The original signs of injury may disappear or resolve to some minimal scar.
- There is a mismatch between the amount of pain and the amount of injury.
- Relatives and doctors begin to express their frustration

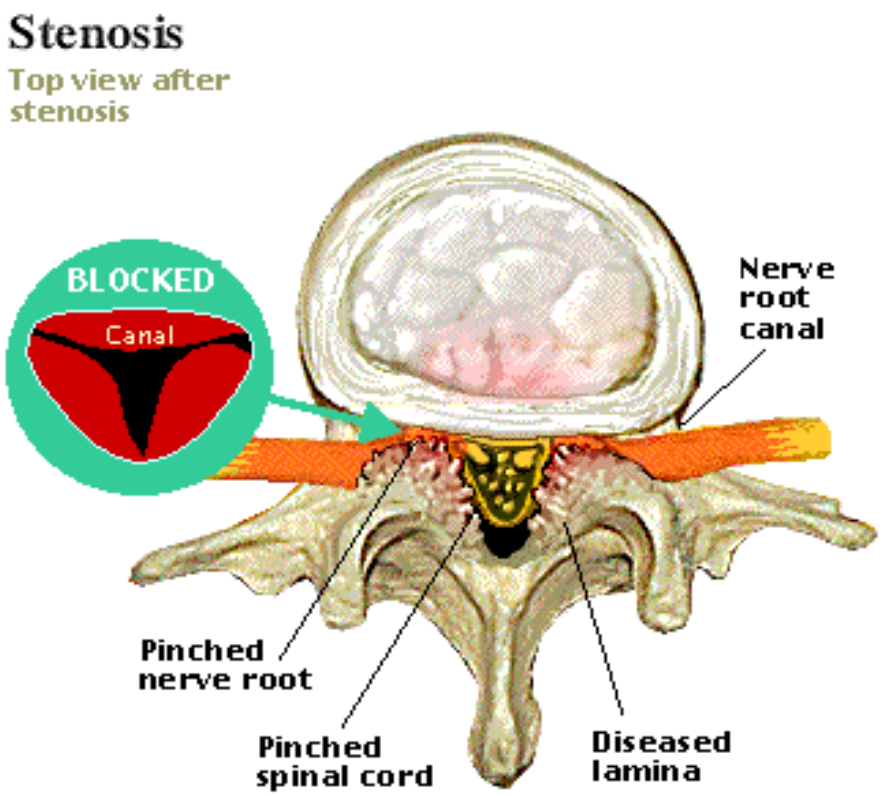
Three Chronic Pain Conditions

- Neuralgia – an extremely painful condition consisting of recurrent episodes of intense shooting or stabbing pain along the course of the nerve.
- Causalgia – recurrent episodes of severe burning pain.
- Phantom limb pain – feelings of pain in a limb that is no longer there and has no functioning nerves.

Herniated Lumbar Disc



Stenosis


Stenosis
Top view after stenosis
BLOCKED
Canal
Nerve root canal
Pinched nerve root
Pinched spinal cord
Diseased lamina

The Language of Pain

- There is difficulty in expressing the pain experience but not because the words don't exist.
- They are words we don't use very often
- The words also seem absurd
  - For example: wrenching, gnawing, stinging, shooting

Four Types of Pain Behaviours

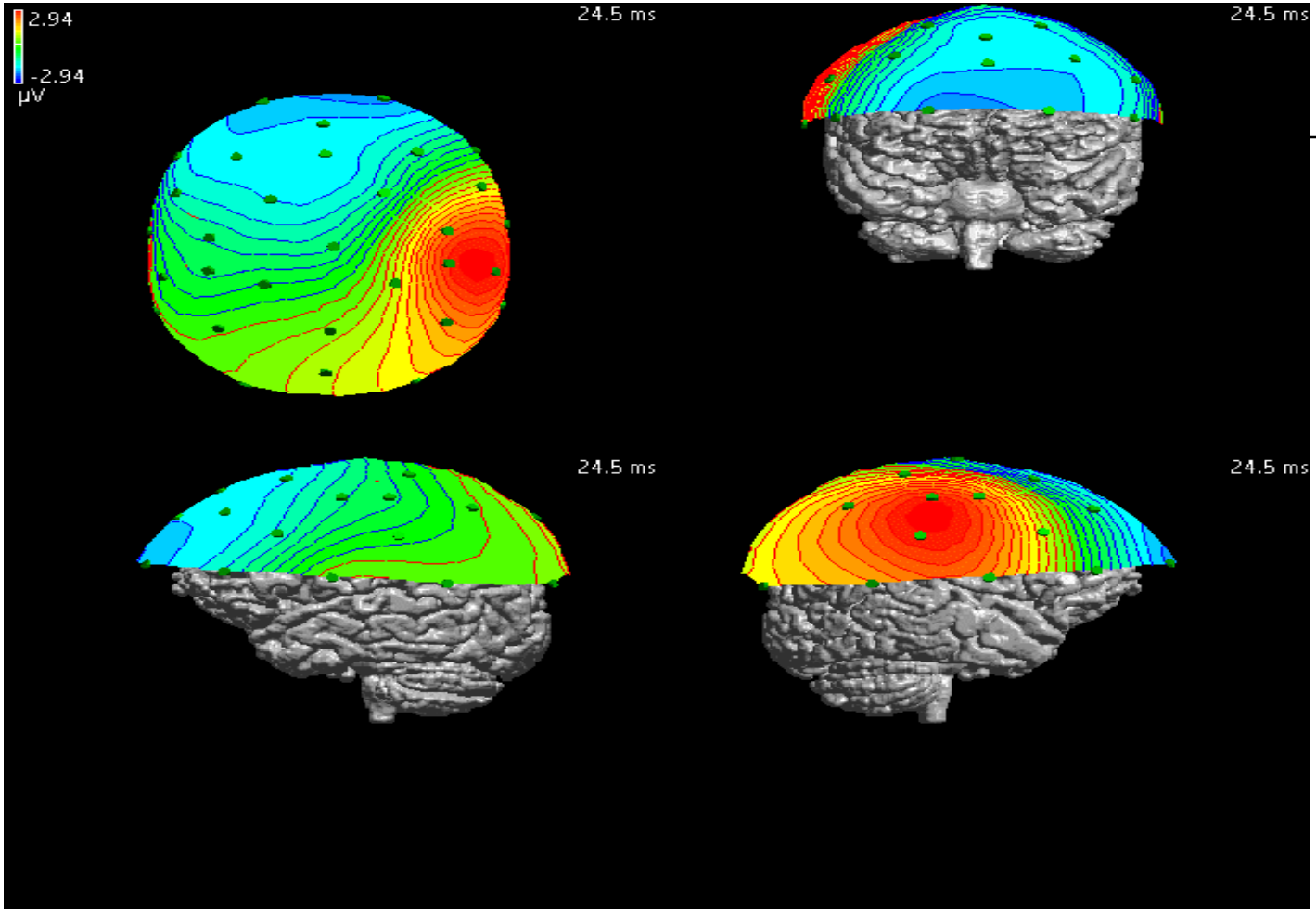
- Facial/audible expression of distress
- Distorted ambulation or posture
- Negative affect
- Avoidance of activity

Measuring Pain

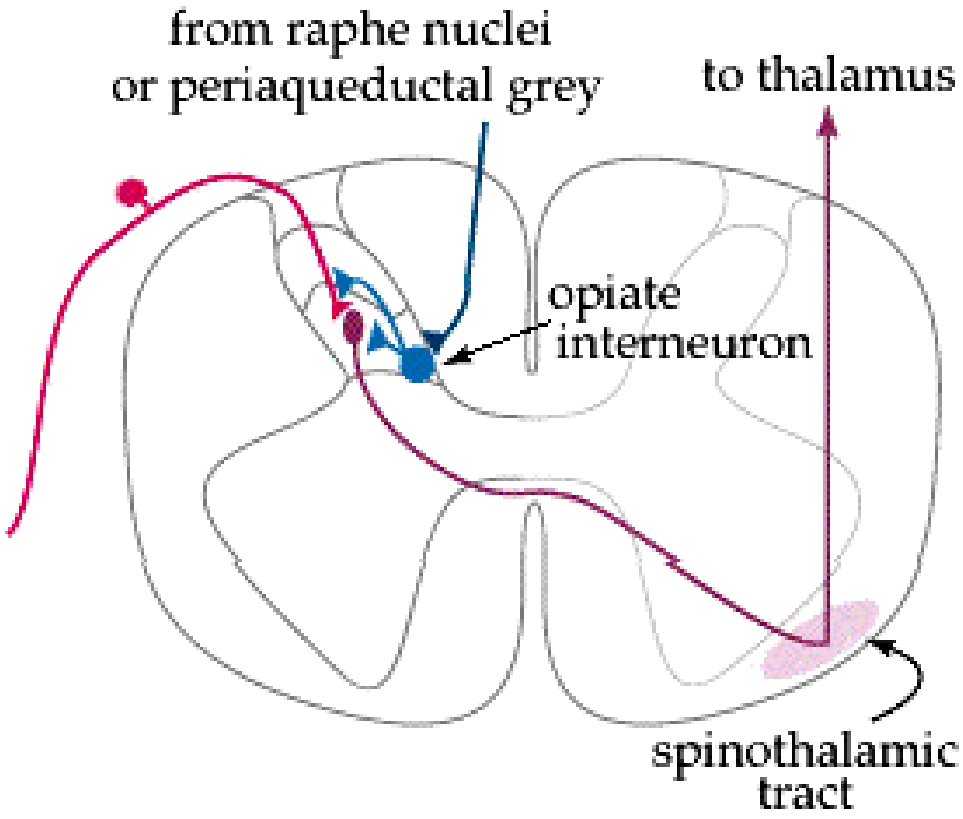
- McGill Pain Questionnaire
- Analog scale
- WHYMPI
- SIP
- Pain Drawing

Towards a Definition of Pain

- Pain research, has not yet advanced to the stage at which an accurate definition of pain can be formulated
- Pain may be defined in terms of a multidimensional space comprising several sensory and affective dimensions.
- We must be content with the guidelines toward a definition rather than a definition itself.


2.94
-2.94
μV
24.5 ms
24.5 ms
24.5 ms
24.5 ms

Opiate Effects in the Spinal Cord



Understanding Pain and Addiction

- 3 concepts that need definition
  - Addiction
  - Pain
  - The pain system

Addiction

- Euphoria
- Craving
- Tolerance
- Loss of Control
- Withdrawal
- Inability to abstain

Addiction-centered lifestyle

- Addictive Lifestyle Losses
- Continued use despite problems
- Substance-induced cognitive disorder

Pain and Addiction

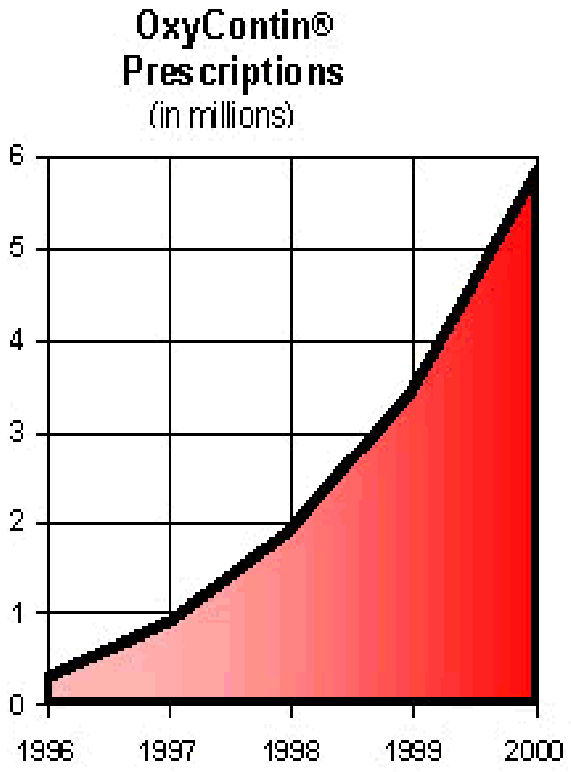
- Addiction often begins during the acute pain experience
- If pain subsides there is usually a brief period of withdrawal from medication which is softened with other medications
- In some patients this process does not occur and the use of addictive medications continues despite the healing of the injury and pain.
  - Most frequently occurs in patients with pre-injury history of addiction.

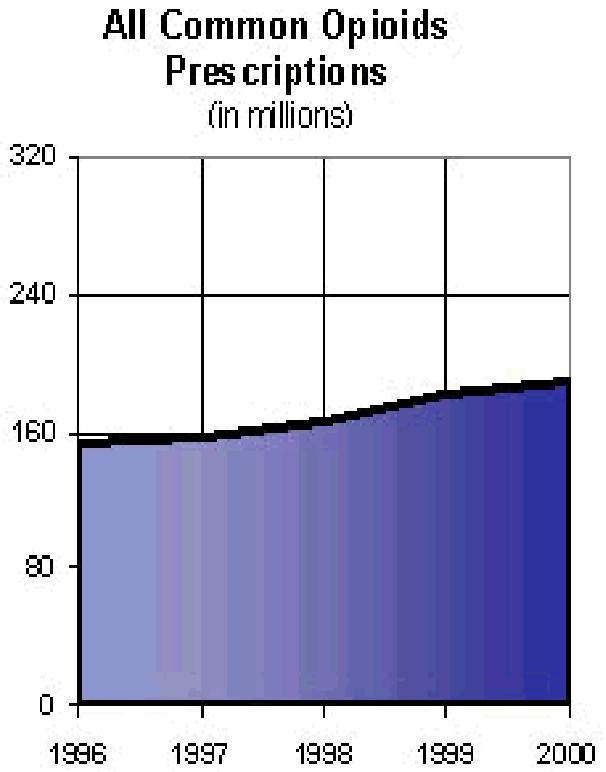
Pain Medications

- Non Narcotic Analgesics
  - Aspirin, Tylenol, etc
- Narcotic Analgesics
  - Codeine, Morphine, Oxycontin, Demerol
- Narcotic and non-narcotic combined
  - Percocet, vicoprophen
- Antidepressant Medications
- Epidural Injections

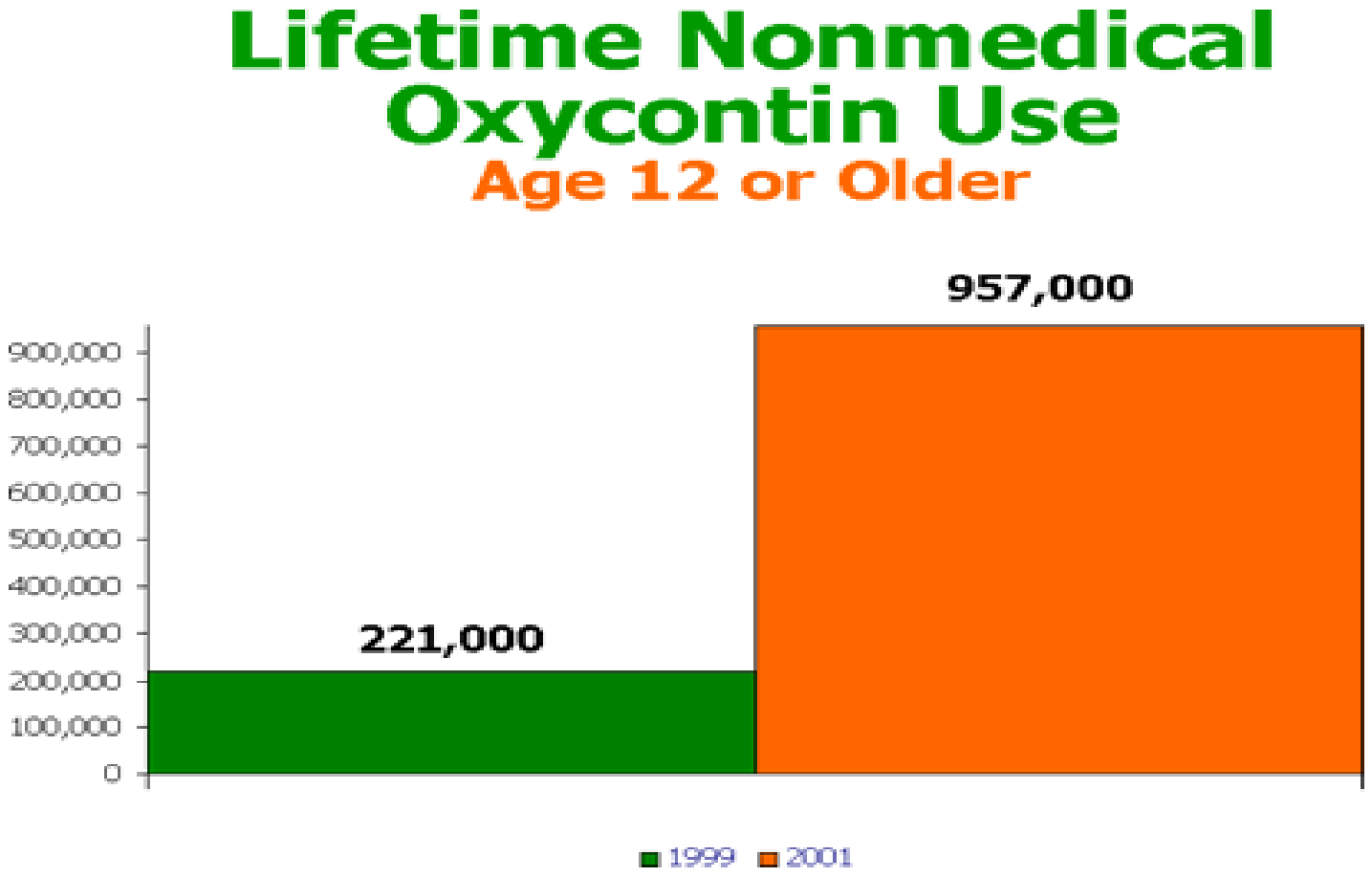
The Problem of Oxycontin

Oxycontin

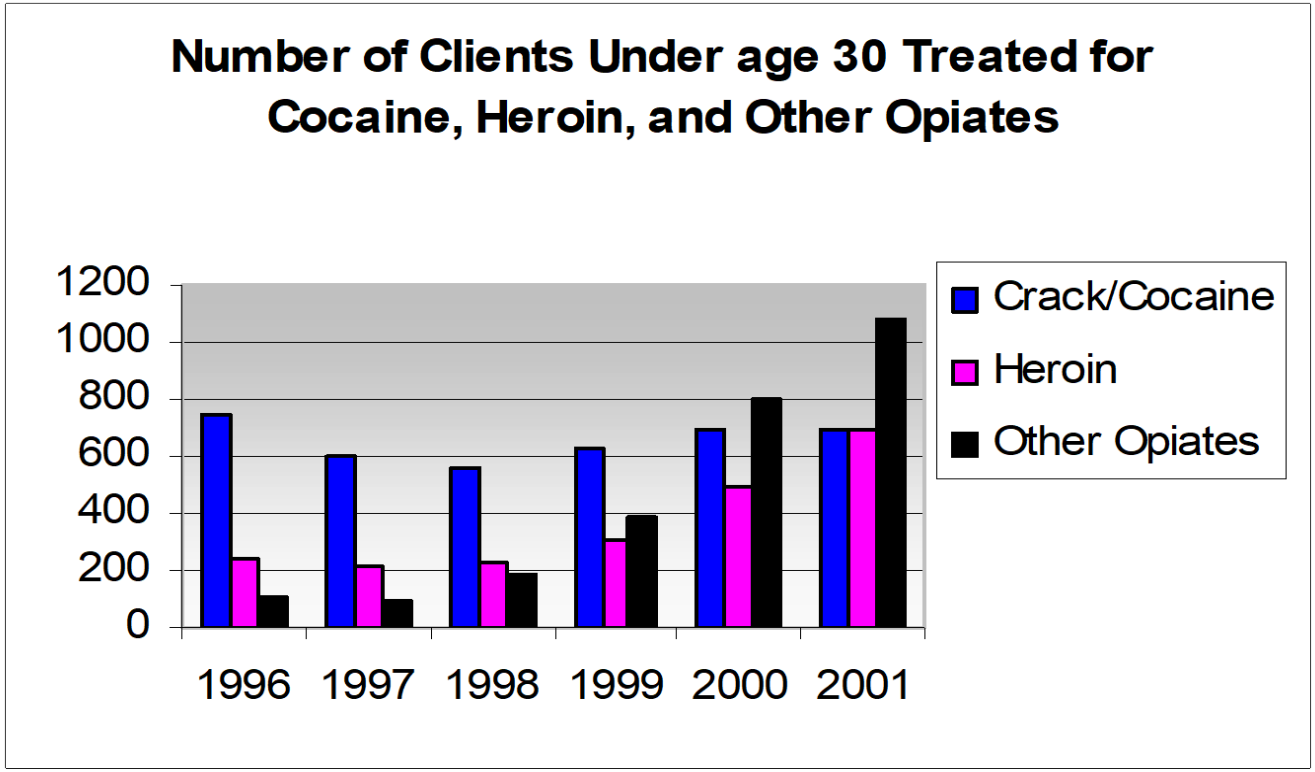

OxyContin®
Prescriptions
(in millions)
6
5
4
3
2
1
0
1996
1997
1998
1999
2000


All Common Opioids
Prescriptions
(in millions)
320
240
160
80
0
1996
1997
1998
1999
2000

Oxycontin

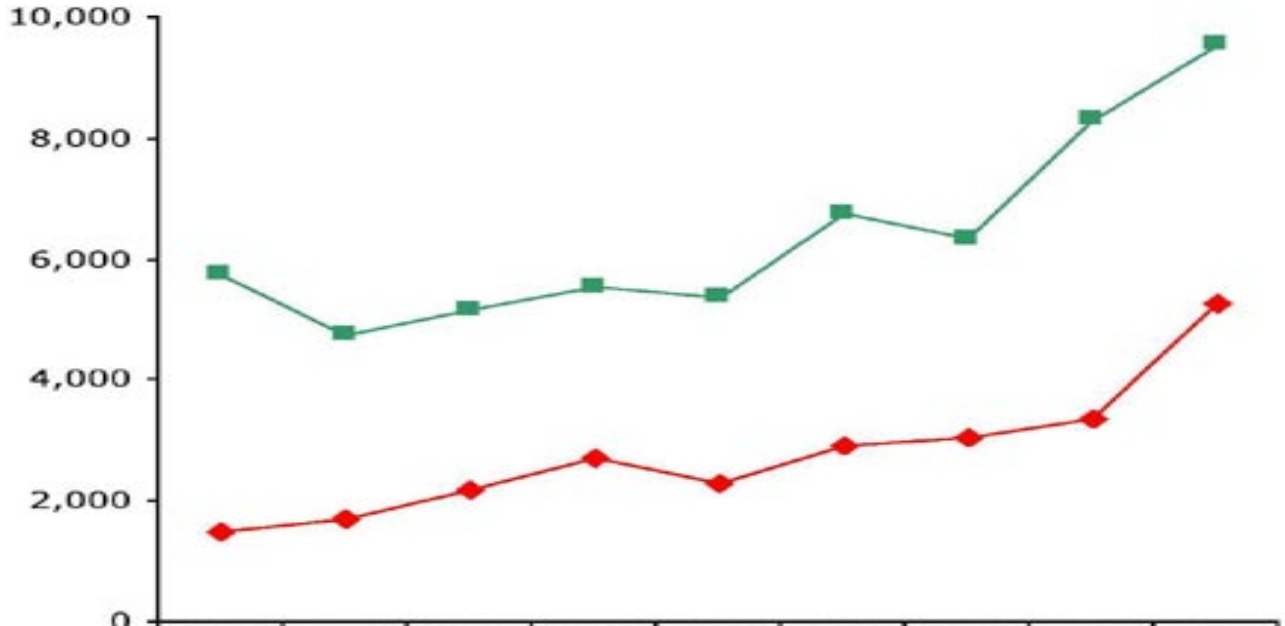

Lifetime Nonmedical Oxycontin Use
Age 12 or Older
957,000
221,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1999
2001

Oxycontin


Number of Clients Under age 30 Treated for Cocaine, Heroin, and Other Opiates
1200
1000
800
600
400
200
0
1996
1997
1998
1999
2000
2001
Crack/Cocaine
Heroin
Other Opiates

Oxycontin

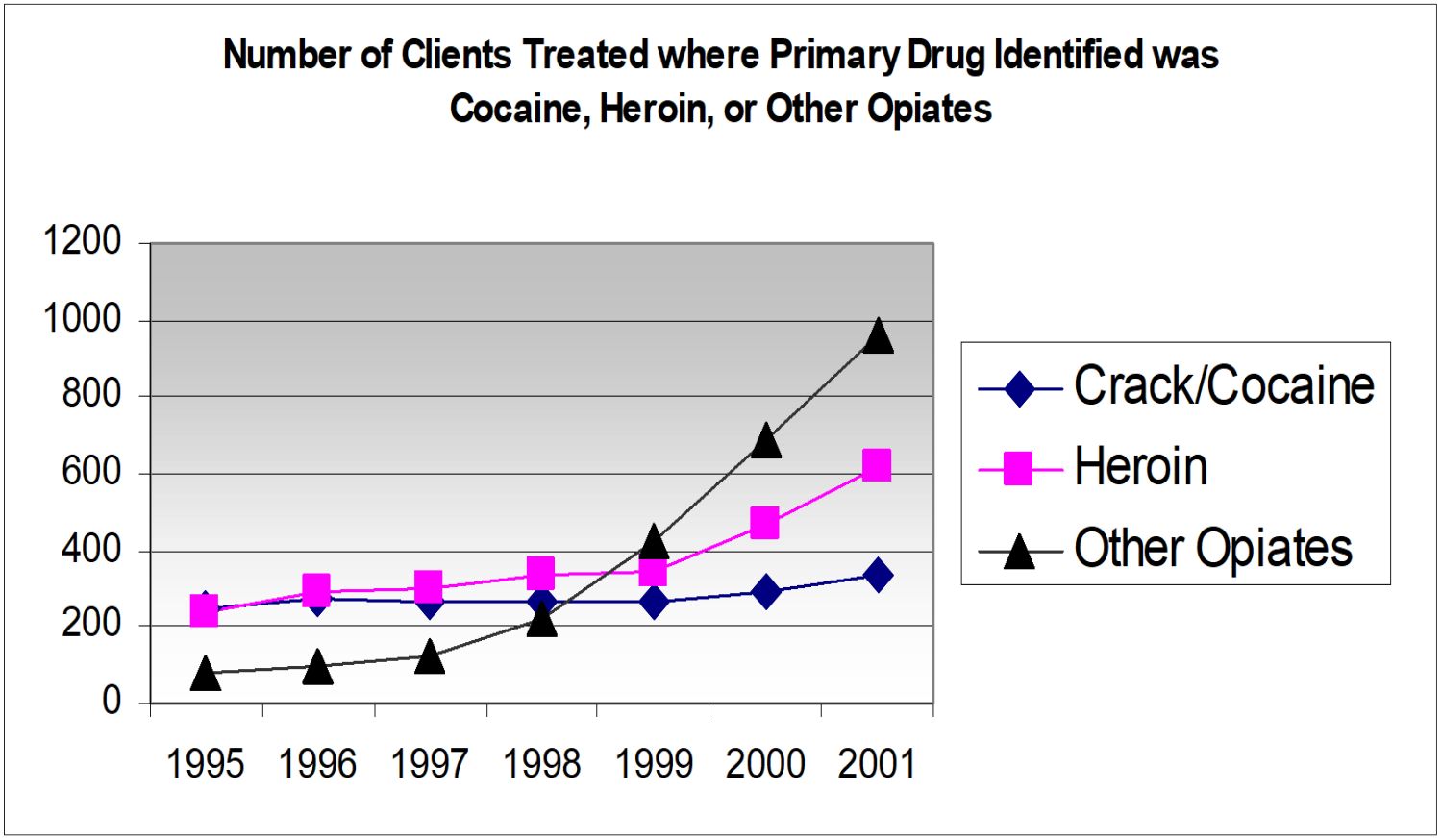
Estimated Number of Oxycodone ED Mentions for the Total Coterminous U.S.: DAWN, 1H96-1H00



	1H-96	2H-96	1H-97	2H-97	1H-98	2H-98	1H-99	2H-99	1H-00
Oxycodone	1,495	1,696	2,165	2,692	2,293	2,918	3,060	3,369	5,261
Hydrocodone	5,741	4,732	5,170	5,535	5,380	6,739	6,341	8,298	9,549

SOURCE: Office of Applied Studies, SAMHSA

Oxycontin


Number of Clients Treated where Primary Drug Identified was Cocaine, Heroin, or Other Opiates
1200
1000
800
600
400
200
0
1995
1996
1997
1998
1999
2000
2001
Crack/Cocaine
Heroin
Other Opiates

Treating the Addicted Pain Patient

- Understanding the effects of chronic pain. Helping the patient articulate their understanding
- Reviewing the effects of each prescription drug the patient takes
- Decision making about pain medications.
  - Explore reasons they started using the medication
  - Make an assessment of life-damaging problems resulting from their use of meds.

Treating the Addicted Pain Patient

- Abstinence Contract and Intervention Planning
- Identifying and Personalizing High-risk situations
  - Identify immediate high-risk situations
- Mapping High-Risk Situations
  - Describe a high-risk situation managed poorly and effectively

Treating the Addicted Pain Patient

- Analyzing and managing High-Risk Situations
  - Identify irrational thoughts, unmanageable feelings, self-destructive urges, self-defeating actions and reactions of others that drive their high-risk situation
  - Identify more effective ways of thinking feeling and acting
- Recovery Planning

Treating the Addicted Pain Patient

- Therapeutic Bonding
  - The pain patient often comes in to the treatment process angry and embarrassed
  - These patient's are very guarded and expect the clinician to minimize their pain symptoms
- Personal Connection
  - The therapeutic relationship is critical

Treating the Addicted Pain Patient

- Active Listening
  - As a focusing question (open-ended)
    - “What caused you to seek treatment at this time?”
  - Listen Carefully to the answer
    - It is critical not to have preconceived notions about what the patient is saying.
    - Listen for the exact words the patient is using and then try to understand what the words mean from the patient’s point of view

Treating the Addicted Pain Patient

- Active Listening
  - Give same word feedback and do an accuracy check
    - “What I heard you say is…” “Did I get it right?”
  - Use different word feedback and do an accuracy check
    - “I think I understand you, but I want to be sure. Let me tell you what I’m hearing you say in my own words.”

Treating the Addicted Pain Patient

- Common problems in therapeutic bonding
  - Denial
  - The one- or two-word answer
  - The big dump (the very long answer)

Denial

- Do...
  - Step out of the power struggle
  - Apologize for misunderstanding
  - Tell the patient you are interested in what he/she said
  - Ask the patient to explain what they really meant
- Don’t...
  - Try to prove you are right
  - Blame the patient for saying it wrong
  - Give the impression that you are angry or annoyed
  - Keep going as if nothing happened

The One- or Two-Word Answer

- Repeat the exact words
- Tell the patient you don't understand and ask him to tell you more about it.
- "Why are you here?" "I screwed up." "You're saying you screwed up?" "Yeah" "I don't understand. Will you tell me more about yow you screwed up?"

The Big Dump (The very long answer)

- Let the patient go through the entire answer without interruption
- You say: “wow that was a lot of information. I really want to understand what you’re telling me. Could we go back to the beginning and that that point by point.”

Treating the Addicted Pain Patient

- You need to stay centered and keep asking for clarification. Questions need to be coming from a place of caring and compassion, not power and control
- The key is asking clear, concise focusing questions; remaining calm; being patient and showing the patient that you care and are interested

Treating the Addicted Pain Patient

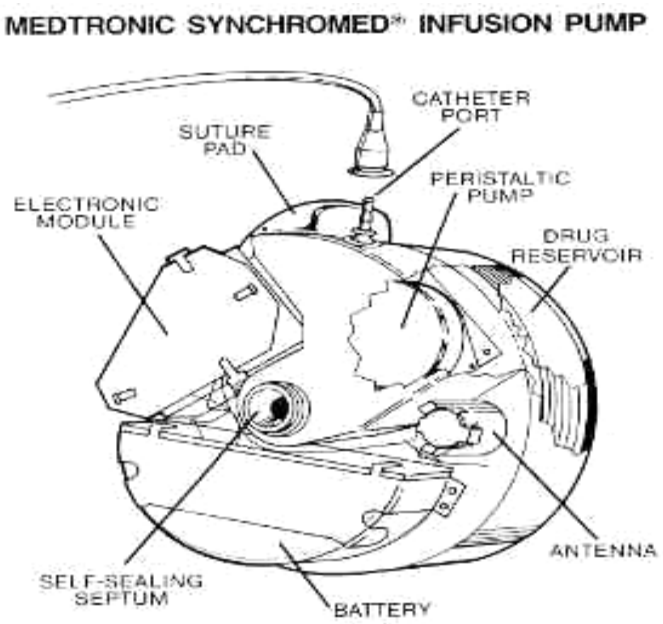
- Collaboration and Team Work
  - Physicians
  - Nurses
  - Psychologists
  - Psychiatrists

Pain Management

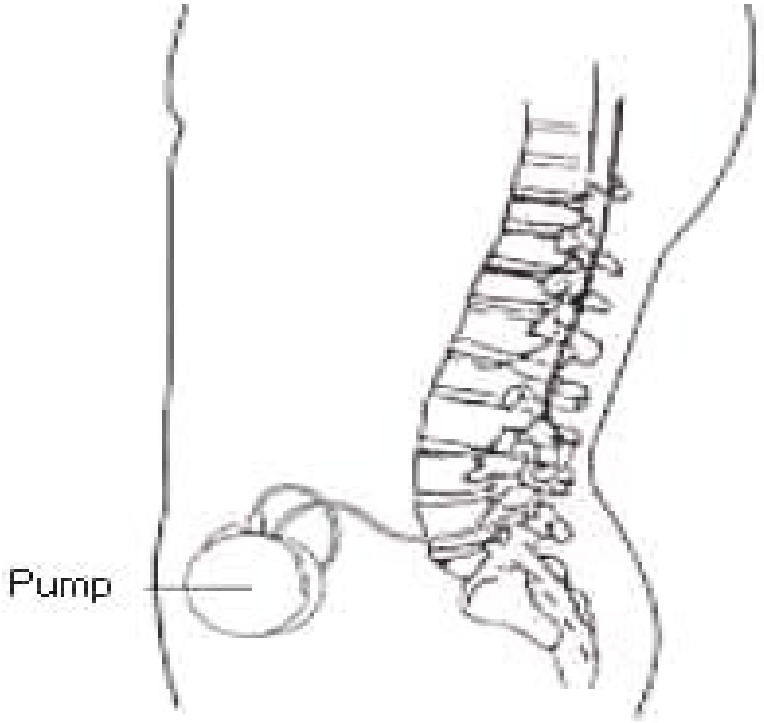
Medically based

- Surgery
- Medications
- Physical Therapy
- Spinal Stimulator
- Morphine Pump

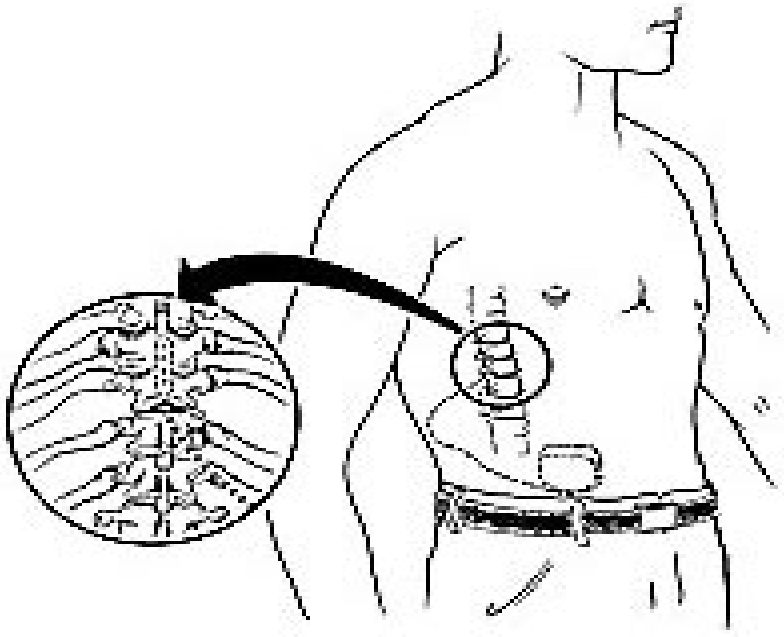
Intrathecal Morphine Pump



Intrathecal Morphine Pump



Spinal Stimulator



Pain Management

- Behavioral
  - Psychotherapy
  - Antidepressant Medications and others
  - Group therapy
  - Relaxation
  - Body mechanics
  - Activity Planning
  - Cognitive behavioral techniques

Pain Management

- Combined programs
  - Interdisciplinary Spine Program
  - Three prongs: Medical, Physical and Psychological
    - Medical: MRI, Neurosurgical evaluation
    - Physical: P.T., pool based, strength, flexibility, and conditioning
    - Psychological: Lifestyle change, motivational enhancement

Pain Management

- Accupuncture
- Craniosacral therapy
- Biofeedback
- Chiropractic care

Pain Management

- Medication issues
  - Switch from typical narcotics to Methadone
  - Use SSRI for mood management
  - Use Tricyclic for sleep management