Meeting Pain Management Challenges in the Patient with Digestive Diseases

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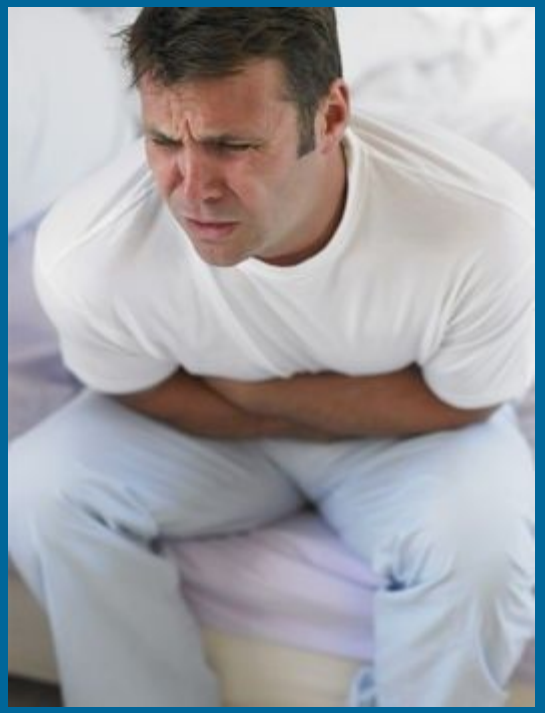
Objectives for today…

For patients with Digestive Diseases, be able to describe:

1. **The bio-psycho-social model of pain**
2. **Barriers to optimal pain management**
3. **Strategies to consider for better pain management**

For the patient with a digestive disease – what pain is like

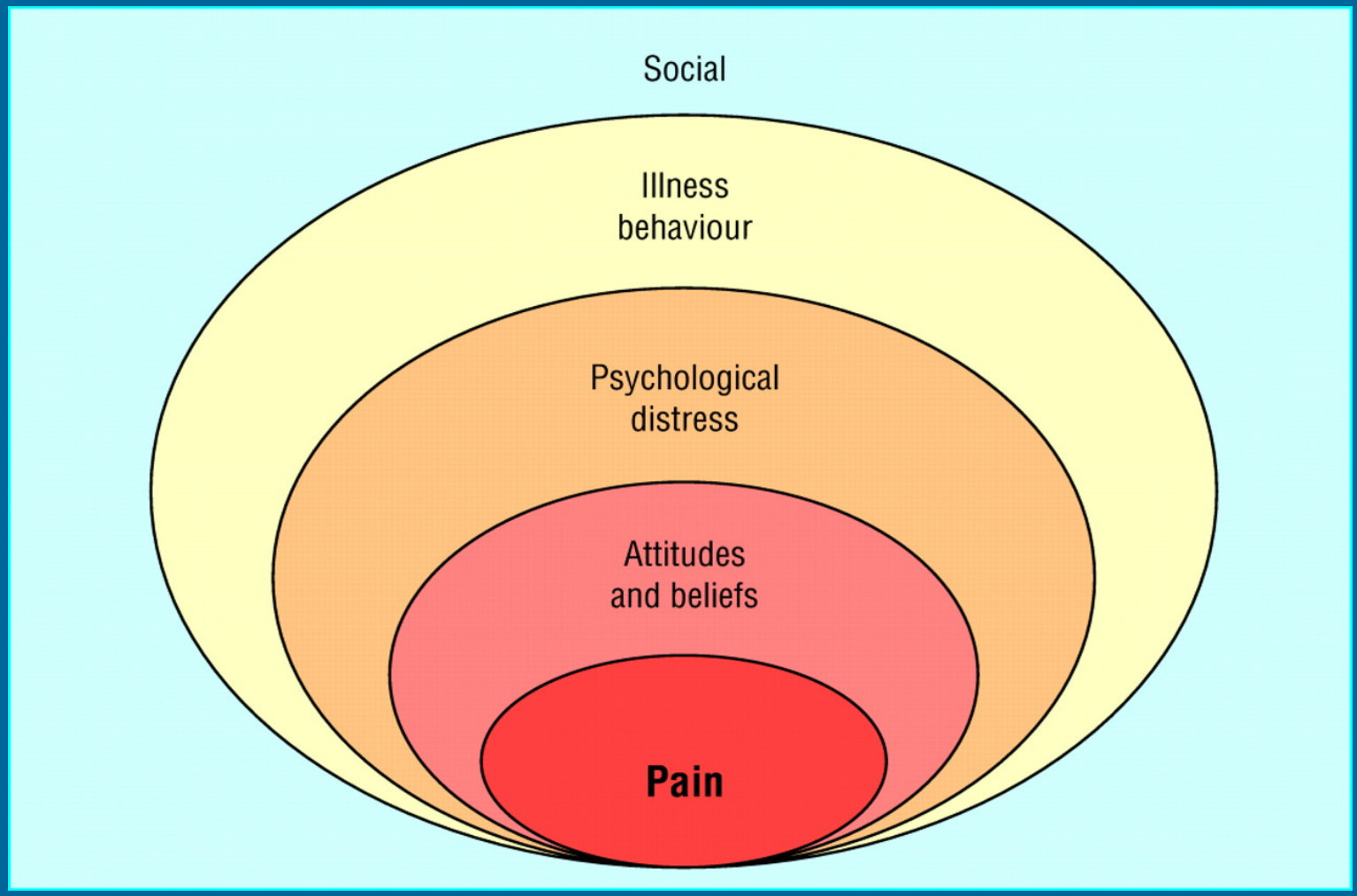
The bio-psycho-social model of pain provides an excellent framework for understanding folks with complex digestive disease issues.



For the patient with a digestive disease – what pain is like

- Bio –
  - Neuropathic pain
    - Sensitization changes to pain in the peripheral and central nervous system
  - Nociceptive pain may include:
    - Visceral pain
    - Somatic pain
- Psycho -
  - Individual & very personal behavioral pain responses
- Social –
  - Often chronic, long term pain in not a very ‘socially acceptable’ body area

The Bio-Psycho-Social Model of Pain



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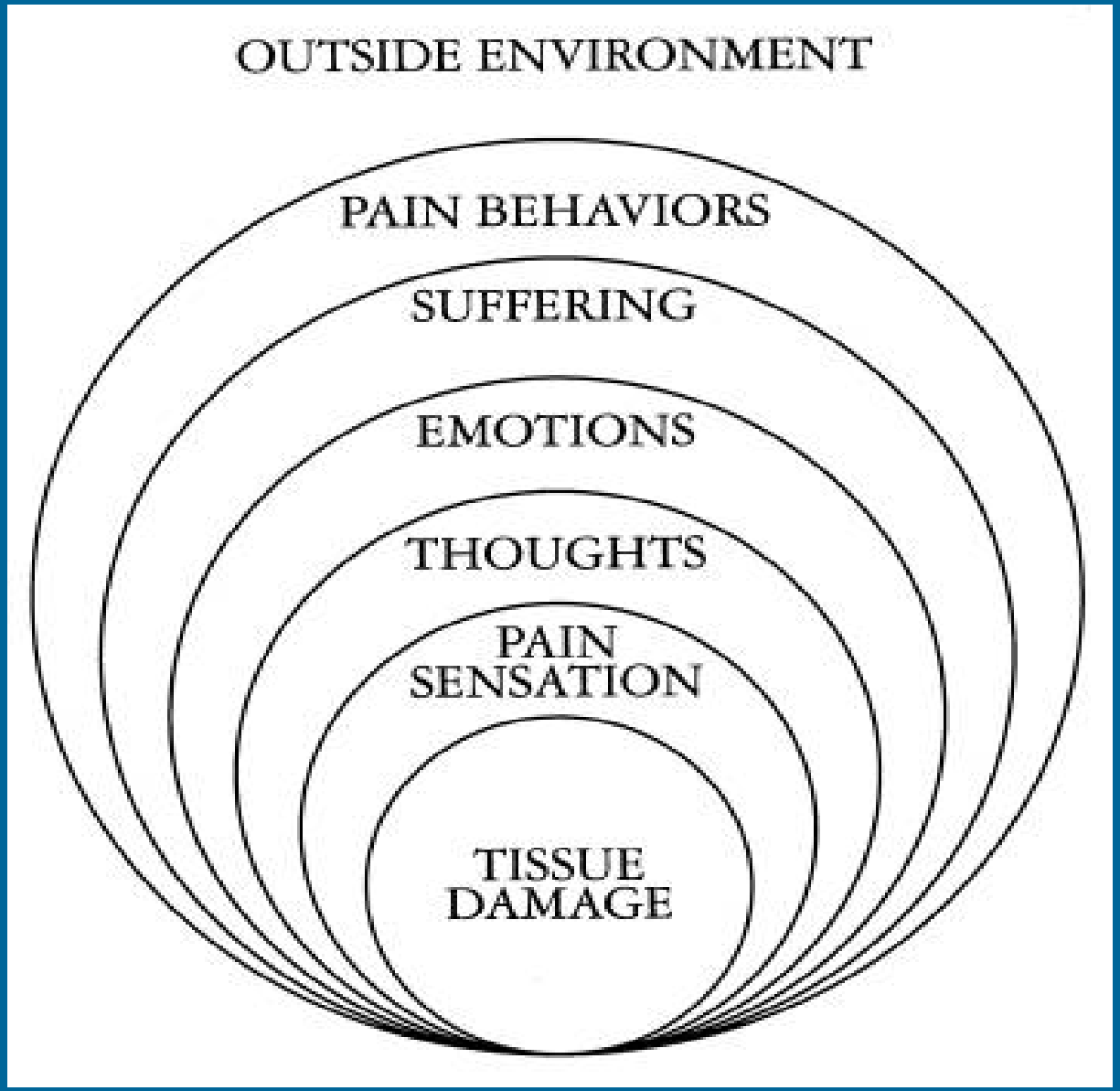
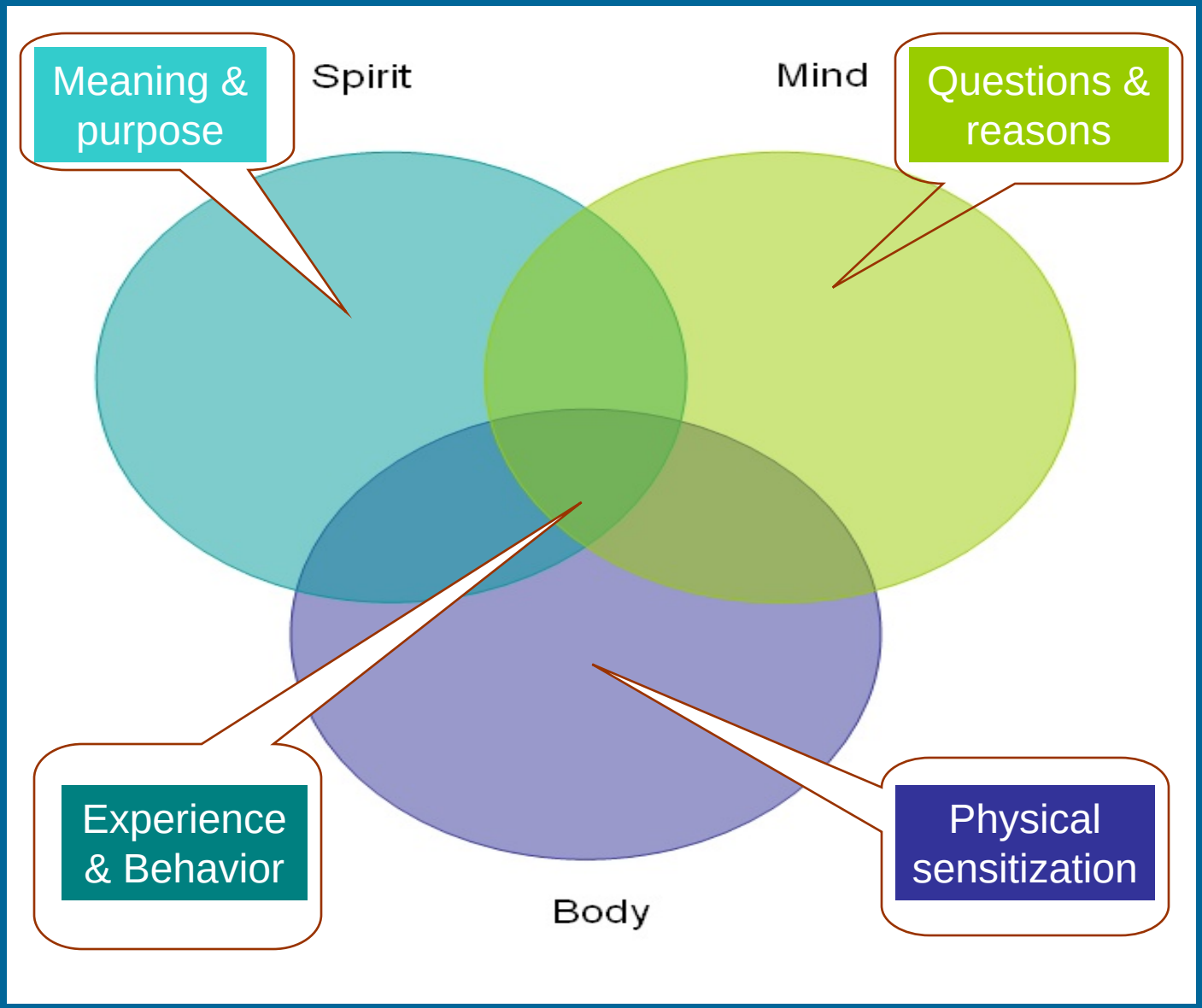

OUTSIDE ENVIRONMENT
PAIN BEHAVIORS
SUFFERING
EMOTIONS
THOUGHTS
PAIN SENSATION
TISSUE DAMAGE


Meaning & purpose
Spirit
Mind
Questions & reasons
Experience & Behavior
Body
Physical sensitization

All of the difficulties in pain management manifest themselves in this patient population!

1. **Subjectivity of pain.**
2. **Emotional component of pain.**
3. **Treatment can be influenced by provider attitudes.**
4. **Treatment side-effects/adverse reactions can be troublesome.**
5. **Pain is often chronic or lingering acute with exacerbation.**
6. **Financial difficulties in obtaining pain treatment due to difficulty maintaining a job.**

Things to remember about the bio-psycho-social model in persons with DD.

- Pain is ALWAYS attached to emotion
  - The psyche is paramount in our relationships, overall health status, and quality of life
- Persons with Digestive Diseases often have symptoms greatly exacerbated by emotions
  - Depression is very common

Things to remember about the bio-psycho-social model in persons with DD.

- Depression in DD
  - Crohn's, IB, and other DDs may be related to autoimmune disease, and are certainly inflammatory diseases.
  - Innate immune cytokines influence virtually every pathophysiological domain relevant to depression.
  - Patients with treatment-resistant depression are more likely to exhibit evidence of increased inflammation.

(Miller & Raison, 2008) American Psychiatric Association

More on Depression and Anxiety…

- In a German study (2011) in *European Psychiatry,* 1083 patients with Crohn's disease & ulcerative colitis reported severe fatigue. Clinically relevant anxiety in 24%, depression in 29% of men and 21% of women.
- Multivariable analysis revealed that a history of acute diverticulitis and a raised anxiety score on the HADS were the best independent predictors of recurrent pain (Humes, et al. 2008) *British Journal of Surgery*

More on Depression and Anxiety…

- Depressive symptoms in patients with perianal Crohn's disease self-reported at very high rates in some studies *(*Mahadev et al. 2011) *Colorectal Disease*
  - 13% reporting feeling suicidal at some point.
  - 73% reporting feeling depressed
  - Associations were found between depressive symptoms and duration of disease, prior surgery, past or present stoma, and anal stenosis.
- Swedish study showed a statistically significant increase in suicide in celiac disease with current inflammation (Ludvigsson, 2011) in *Digestive and Liver Disease*

The importance of optimal pain management

- Without optimal attention to pain, the patient doesn't want to deal with anything else!
  - Not diet
  - Not medication
  - Not activity
  - Not the future

Consider the DD patient population

- Many with multiple surgeries and procedures
- Persistent post-operative pain is common
  - Seen more often in those with depression
  - More often in those with poorly managed pain prior to surgery
  - More often in younger patients
  - Presents like neuropathic, chronic pain

Poorly controlled pain affects:

- The immune system
- The cardiovascular system
- The respiratory system
- The brain
- The psyche
- Healing

In the hospital…

- Poorly controlled pain leads to
  - Poor physical responses in cardiac, respiratory, endocrine, immunity, and healing mechanisms
  - Lack of desire/ability to be involved in self-care
  - Increased length of stay
  - Aggravation of old chronic pain issues
  - Risk of increased neurological damage and new chronic pain
  - Emotional distress

In the community…

- Poorly controlled pain leads to
  - Physical, emotional, and social distress
  - Less ability to return to work and general functionality
  - Greater use of health care system – return to ER and physician visits due to unmanaged pain
  - Greater drive to use un-prescribed pain medication
  - Lower quality of life

Barriers

- Complexity of medical issues –
  - Often there are many other medical issues
  - Chronic issues other than pain
- Nutrition factors
  - Not always able to get adequate nutrition
  - Absorption factors
  - Intrinsic in the diagnosis
  - Post-surgical issues

Barriers

- Health care provider issues
  - Does the patient trust the care-giver?
  - Does the patient repeatedly feel the need to explain they are NOT drug-seeking?
- Opioid tolerance or hyperalgesia
  - A huge reason for ineffectual analgesia in the hospital and post-discharge
  - Not the patient's fault – it's how opioids work!

Barriers

- Long term pain behaviors
  - Chronic pain behaviors include typical ways of dealing with life in pain
- Symptoms can be vague
  - Gut pain is not always easily described – it can be visceral, somatic, or neuropathic

Barriers

- Malingering – “to pretend to suffer in order to avoid work”
- Pseudo-addiction – an iatrogenic* syndrome resulting from poorly treated pain
- Tolerance – exposure to a drug results in a diminished effect of the drug of a need for higher dosage to maintain the same effect
- Dependence – exposure to a drug for any length of time that would precipitate withdrawal if the drug is stopped

**Induced in a patient by a physician's activity, manner, or therapy*

Barriers

- Addiction – DSM-IV (Diagnostic Statistical Manual of Mental Disorders)
  - A medical diagnosis characterized by an individual's inability to stop using even when it is in his or her best interest to do so.
  - Criteria include:
    - 1) Desire or sense of compulsion to take the drug
    - 2) Difficulties in controlling drug-taking behavior in terms of its onset, termination, or levels of use
    - 3) Progressive neglect of alternative pleasures or interests because of drug use
    - 4) Persistent use despite harm

Barriers encountered with pharmaceutical methods of pain management:

- Opioids
  - The issue of opioid abuse and misuse
  - Creating tolerance/hyperalgesia
- What about absorption of medication and nutrients?
  - Short-gut
  - Post-surgical issues/wound issues
  - Gastroparesis

Strategies for overcoming pain management barriers

- Begin with proper pain assessment
  - *Check your attitude*
  - *Use the right tool – acute vs. chronic pain management assessment tools*
- *Treat WHO not WHAT*
  - *Pain, especially DD pain, is highly personal!*

Strategies for overcoming pain management barriers

- *Check for and treat depression*
  - *The Beck Depression Inventory-II (BDI-II*
  - Hospital Anxiety and Depression Scale
  - Pay attention to suicide question answers
  - Or just ask, “Do you feel sad or depressed?”
  - Or “Do you every feel like you want to kill yourself?”

Strategies for Managing Acute DD Pain

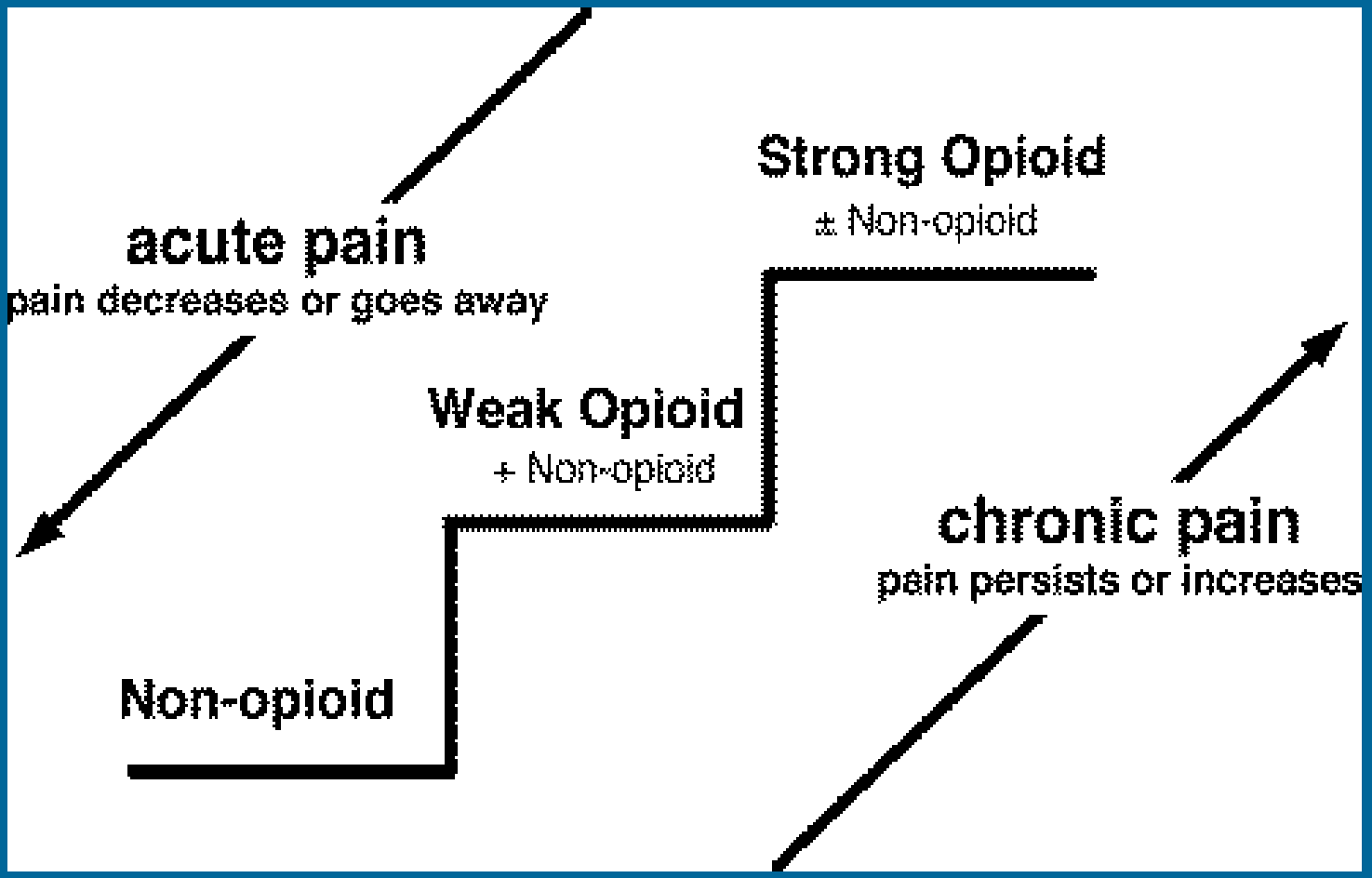
- First, remember that *acute pain* can be
  - Post-surgical
  - Non-surgical new pain
  - Exacerbation of chronic pain
  - Must be investigated

- *Develop a comprehensive, individualized* ***pain management plan***

Strategies for Managing Acute DD Pain

- Pharmaceutical methods
  - Usually first line, most effective
    - Opioids
    - Non-opioids
    - Adjuvant
    - The WHO ladder TOP-DOWN!

World Health Organization (WHO) Pain Management Ladder



Opioids

- First line for acute pain because it works!
- Be aware of these needs:
  - Higher dosing due to patient exposure/tolerance in the past. Very important to know this!
  - Hyperalgesia considerations
  - Use the right opioid for the right conditions
    - Age
    - Renal function
    - Hepatic function
    - Poly-pharmacy

Opioids

- Administration methods can make all the difference
  - Routes of Administration
    - IV
    - Oral
    - Buccal
    - Sublingual
    - Rectal?
    - Subcutaneous

Opioids

- Around The Clock (ATC) vs. PRN
- PCA or no PCA
  - Timing vs. dosing vs. patient preference
  - Weaning

Others

- Nucynta
  - Dual mechanism of action
    - Weak opioid
    - Blocks re-uptake of norepinephrine
    - Less abuse potential
  - Helpful for those with bowel motility and aggravation issues
- Buprenorphine
  - Various formulations, but less abuse potential
- Methadone
  - Not for the inexperienced-doser!
  - Effective and cheap for chronic pain use

Non-opioids

- Never underestimate non-opioids for good pain relief!
  - Acetaminophen
    - Now available in IV route - Ofirmev™
    - Can potentiate and act as opioid-sparing medication
    - Safe in most cases at recommended dosages
  - Ibuprofen, Ketorolac, and Celecoxib
    - Very effective in ‘eligible’ patients
    - When deemed ineffective, it’s often not given in therapeutic doses

Adjuvants

- Alpha-adrenergic agonist
  - Clonidine
  - Zanaflex
- Anti-convulsants
  - Neurontin
  - Pregabalin
  - Trileptal
  - Dilantin
  - Topamax

Adjuvants

- Anti-depressants
  - Norpramin (Desipramine) or Nortriptyline (Aventyl or Pamelor)– preferred over amitriptyline (Elavil)
  - Bupropion (Wellbutrin) –
  - Duloxetine (Cymbalta)*
  - Milnaciprna (Savella)*
  - Venlafaxine (Effexor)*
  - Others – second and third in line for neuropathic pain: Elavil, Tofranil, Remeron, Prozan, Paxil, Zoloft, Zometa

*Reduce dose by 50% in hepatic or renal insufficiency

Adjuvants

- Corticosteroids
  - Dexamethasone
  - Prednisone
- Others
  - Cannabis – medical marijuana helpful or with paradoxical effects?

Adjuvants

- Others
  - Vitamin D – Low levels in persons with DD - deficiency is between 22% and 70% for Crohn's disease and up to 45% for ulcerative colitis
    - Assists with immune system regulation
    - Serum 25OHD levels must be much higher than what we consider 'adequate' for bone health in order to exert beneficial effects on the immune system.
    - vitamin D is lipid soluble and thus dependent on an intact fat absorption mechanism: problems with difficulty in bile salt deficiency, loss of absorptive surface, increased intestinal permeability, and loss of liver function (Pappa et al., 2008) *Current Opinion in Gastroenterology*
  - *I advocate sunlight exposure whenever possible!!*

Non-Pharmaceutical Strategies for Managing Acute DD Pain

- Part of overall pain management plan
  - Can be extremely effective
    - Based on bio-psycho-social responses
    - Must be presented and used correctly
    - Also useful for persistant pain
  - Include
    - Reiki
    - Therapeutic Touch
    - Gentle massage – not necessarily to painful area!

Non-Pharmaceutical Strategies for Managing Acute and Chronic DD Pain

- Include
  - Acupuncture*
  - Warm baths – showers – for relaxation
  - Music
  - Distraction – games, hobbies, TV
  - Spiritual attention – prayer
  - Counseling – treat mood issues
  - Sleep disturbance issues
  - Light exposure – circadian issues

What about on-going Chronic DD Pain?

- Include
  - Many of the strategies used for acute pain may be helpful
  - Careful of continued, escalating opioids since hyperalgesia may result
  - Good counseling is likely imperative for success

Clinical pictures that present the most challenges

- *Hepatic failure*
  - *Liver transplant*
    - *few prospective studies have offered an evidence-based approach.*
    - Generally, Fentanyl is safest opioid but use *adjuvants*
- *Renal failure*
  - *Kidney transplant*
    - *Fentanyl, again, safest, but use adjuvants*

Clinical pictures with the most challenges

- Ileus
  - *Few studies have addressed pain/symptom management*
  - *Opioid administration is appropriate pain treatment even in the context of suspected bowel obstruction (Davis, Hinshaw, 2006).*
- Severe constipation and/or impaction –
  - *remove/treat fecal impaction,*
    - *Laxatives*
    - *methylnaltrexone (Relistor)*
    - *Reglan may also help increase GI activity.*
    - *Corticosteriods*
    - *Anticholinergics and Antiemetics*

Clinical pictures with the most challenges

- Gastroparesis
  - Oral medications will not absorb properly
    - Use other routes
    - Frustration will ensue if this is overlooked
  - Is no excuse for inadequate pain management

Challenging, yes, but….

Pain is no longer just a physiological response awaiting a pharmacologic treatment. Pain is a human response; pain is a suffering person in need of both competent treatment and compassionate attention.

(Betty Farrell, PhD, 2011)

Thank you!