Update on Pain Management
2021 Pain Conference
Ascension Alabama
10/28/2021

Linda Vanni, MSN, RN-BC, ACNS-BC, NP, AP-PMN

Nurse Practitioner, Pain Management

Professional Pain Education & Consulting, LLC

Ascension Nurse Consultant

Conflict of Interest Disclosure

- **Conflict of Interest**

Author: Linda Vanni-None

. I have no relevant financial relationships with any ACCME-defined commercial interest to disclose.
. I will not discuss off label use and/or investigational use in my presentation.
3. All Ascension planners, reviewers, and course directors have no relevant financial relationships with ACCME-defined commercial interests.

Objectives

- Identify aspects of the pandemic that have affected the opioid epidemic
- Discuss the hierarchy of pain assessment and how pain assessment influences the pain management of acute and chronic pain patients
- Describe new trends in multi-modal pain management

Hot Topics

- Mandatory Education on Pain for Re-Licensure
- The Opioid Epidemic
- From strictly Self Report to Functional Status
- The Switch to Multi-Modal, Opioid Sparing
- Marijuana
- Integrative Therapies

Pain - By the numbers

U.S. PAIN FOUNDATION

CHRONIC PAIN FACTS

WHAT IS CHRONIC PAIN?

Chronic pain can be defined as pain that persists most days or every day for six months or more. For some individuals, pain can last a lifetime.

Chronic pain can take many forms:

- MILD TO SEVERE
- INTERMITTENT TO CONTINUOUS
- ANNOYING TO DISABLING

Prevalence

50 MILLION American adults, or 20 percent of the population, live with chronic pain.

20 MILLION or 7% of American adults live with high-impact pain, or pain that frequently limits life or work activities.

Pain is the **NUMBER ONE** reason Americans access the health care system.

Impact and cost

Chronic pain is **THE LEADING CAUSE** of long-term disability in the United States.

The nation spends up to **$635 BILLION EACH YEAR** on chronic pain in terms of medical treatments, disability payments, and lost productivity.

Chronic pain has biopsychosocial implications. It is associated with **REDUCED QUALITY OF LIFE**, including increased risk of anxiety and depression.

CHRONIC PAIN PATIENTS ARE OFTEN OVERLOOKED AND UNDERTREATED.

Veterinary students **SPEND 5X** as many education hours focused on pain management as medical students.

For every **10,000 PEOPLE** with severe pain, there is only **ONE BOARD-CERTIFIED** pain specialist.

The National Institutes of Health dedicates approximately **2 PERCENT** of its funding to pain research.

At least **10 PERCENT** of all suicide cases in America involve someone with chronic pain.

Patients receive an average of **ONLY 30% PAIN REDUCTION** from their various treatments.

Studies have shown that **MINORITY GROUPS** and other marginalized populations are at risk of receiving suboptimal pain management.

To learn more about our free programs for people with pain, visit www.uspainfoundation.org.

SOURCES

https://www.cdc.gov/mmwr/volumes/67/wr/mm6736a2.htm
https://www.ncbi.nlm.nih.gov/pubmed/22553896
https://www.ncbi.nlm.nih.gov/pubmed/26028573
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4590163/
https://report.nih.gov/nihfactsheets/ViewFactSheet.aspx?csid=57
https://www.ncbi.nlm.nih.gov/pubmed/24916035
https://www.ncbi.nlm.nih.gov/pubmed/22607834
https://www.ncbi.nlm.nih.gov/pubmed/21704872
https://www.ncbi.nlm.nih.gov/pubmed/21945594
http://www.abpm.org/faq
https://www.ncbi.nlm.nih.gov/pubmed/24061868
https://www.hhs.gov/about/budget/budget-in-brief/nih/index.html
https://annals.org/aim/fullarticle/2702061/chronic-pain-among-suicide-decedents-2003-2014-findings-from-national
https://www.cdc.gov/nchs/products/databriefs/db390.htm

Pain – By the numbers

83 Million Adults living in pain
75 Million People with chronic debilitating pain
4.5 Million patients die each year in pain
26% of nursing home residents experience pain
80% of all physician visits are for chronic pain
Cost 100 billion annually in medical claims

26.5 Billion spent on medical services for back pain alone!

Managing Pain in a Time of Opioid Crisis

88%
of surgical patients
report **moderate to extreme pain**
(Gan, 2017)

25% of patients
having **abdominal hysterectomy** and
37% of patients
having **thoracotomy** report
persistent pain at 4 months
(Montes et al, 2015)

Chronic pain impacts more American's than **diabetes, heart disease, cancer** and **stroke** (CDC, 2015)

2 million Americans, age 12 and older, either **abused** or **were dependent on opioid pain** relievers in 2013

In 2013, **16,000 people died** in the United States from **overdose related to opioid pain relievers** ***(4 times the number in 1999)***

The **United States** is **5% of the world's population** but **consumes 85% of the world's opioids** (CDC, 2015)

CDC Guidelines Suggest Doctors Reign in Prescription of Opioids

CDC Guidelines for Prescribing Opioids

Determining when to use opioid medications:

- Physicians should look to opioids to treat chronic pain after considering non-pharmacologic therapy and non-opioid pharmacologic therapy
- Physicians and patients should establish treatment goals for opioid therapy regarding pain and function
- Patients and providers should regularly discuss the risks, benefits and management of opioid therapy as the treatment is being administered
- Providers should not prescribe opioids unless it is determined that the potential benefits outweigh the potential harms

Opioid Selection, Dosage, Duration and Continuation

- Physicians should prescribe immediate-release opioids when starting opioid therapy for chronic pain
- Patients should use the lowest effective dosage
- If prescribed for acute pain, opioids should be taken for short time periods – in these instances, three days or less is typically beneficial, while more than seven days is rarely necessary

Assessing Opioid Risk & Addressing the Harms of Use

- Clinicians should review the patient's history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data
- If prescribing opioids for chronic pain, clinicians should use urine drug testing before and periodically during opioid therapy to assess for prescribed medications and other controlled prescription and illicit drugs
- Clinicians should offer or arrange evidence-based treatment for patients with opioid use disorder

**These guidelines are for primary care clinicians, are nonbinding, and do not apply to cancer treatment, palliative care, or end-of-life care*

Our Oncology Patients

- It is unethical not to treat oncologic pain
- Don’t forget to assess for possible diversion by family (implanted device)
- What measures can we take to prevent diversion?
  - Pill counts (a little help from the clerk)
  - Drug screens (granddaughter), new frontier screening
  - Small amount of controlled substances at a time
  - Screening tools
  - Of course, the MAPS

- Requesting early refills; wrong pain treatment plan, new treatment related pain, pseudo-addiction ?

North Carolina Health News, 10/16/18

- **Physicians refusing to write prescriptions**
- **Pharmacies refusing to fill prescriptions**
- **Patient distraught and suicidal**
- A group called Don't Punish Pain (DPP) was started by a pain patient in Rhode Island, now a support group on Facebook
- The CDC says that about 11 percent of American adults report feeling pain on a daily basis and that between 9 and 11 million U.S. adults were prescribed long-term opioid medication in 2005.
- The Institute of Medicine states that pain is a public health issue that affects more than 100 million Americans.
- "They put me down as 'drug-seeking.' That used to only happen if they couldn't find a reason for the pain"
- "Why is it the lives of those who die from overdose are being tracked, but not those who die from suicide?"

gabapentin abuse

Gabapentin classified as Schedule V controlled substance in Alabama

Ohio Substance Abuse Monitoring Network issued alert, February 2017

Fifth most prescribed drug in nation (GoodRx)

Can enhance euphoria caused by opioids and stave off drug withdrawals

Bypasses the blocking effects of medications used for addiction treatment, enabling patients to get "high" while in recovery (STAT, 2017)

1/5 of those abusing opioids misuse gabapentin (Addiction, 2016)

300 mg pill sells for as little as 0.75 cents on the street

COVID-19 and the opioid crisis: When a pandemic and an epidemic collide

STACY WEINER, SENIOR STAFF WRITER
JULY 27, 2020

- Researchers say it's too soon to have definitive data on the pandemic's effects, but early numbers are concerning. So far, alcohol sales have risen by more than 25%. A recent analysis of 500,000 urine drug tests by Millennium Health, a national laboratory service, also showed worrisome trends: an increase of 32% for nonprescribed fentanyl, 20% for methamphetamine, and 10% for cocaine from mid-March through May. And suspected drug overdoses climbed 18% in the same period, according to a national tracking system run out of the University of Baltimore.

Table 1. Examples of Instruments Assessing Opioid and Nonopioid Risk

Category	Items, No.	Administered By
Patients considered for long-term opioid therapy:		
ORT: Opioid Risk Tool[7]	5	Patient
SOAPP®: Screener and Opioid Assessment for Patients with Pain[8]	24, 14, and 5	Patient
SISAP: Screening Instrument for Substance Abuse Potential[9]	5	Patient
DIRE: Diagnosis, Intractability, Risk, and Efficacy Score[10]	7	Clinician
Assess misuse once opioid treatment initiated:		
PDUQ-p: Prescription Drug Use Questionnaire-patient[11]	31	Patient
COMM: Current Opioid Misuse Measure[13]	17	Patient
PMQ: Pain Medication Questionnaire[14]	26	Patient
PADT: Pain Assessment and Documentation Tool[15]	41	Clinician
ABC: Addiction Behavior Checklist[16]	20	Clinician
Nonopioid general substance abuse:		
CAGE-AID: Cut Down, Annoyed, Guilty, Eye-Opener Tool, Adjusted to Include Drugs[19]	4	Clinician
RAFFT: Relax, Alone, Friends, Family, Trouble[20]	5	Patient
DAST: Drug Abuse Screening Test[21]	28	Patient
SBIRT: Screening, Brief Intervention, and Referral to Treatment[22]	Varies	Clinician
AUDIT-C: Alcohol Use Disorders Identification Test: Consumption[23]	3	Patient
DUDIT-E: Drug Use Disorders Identification Test: Extended[24]	54	Patient

Opioid Risk Tool

Sex: Female

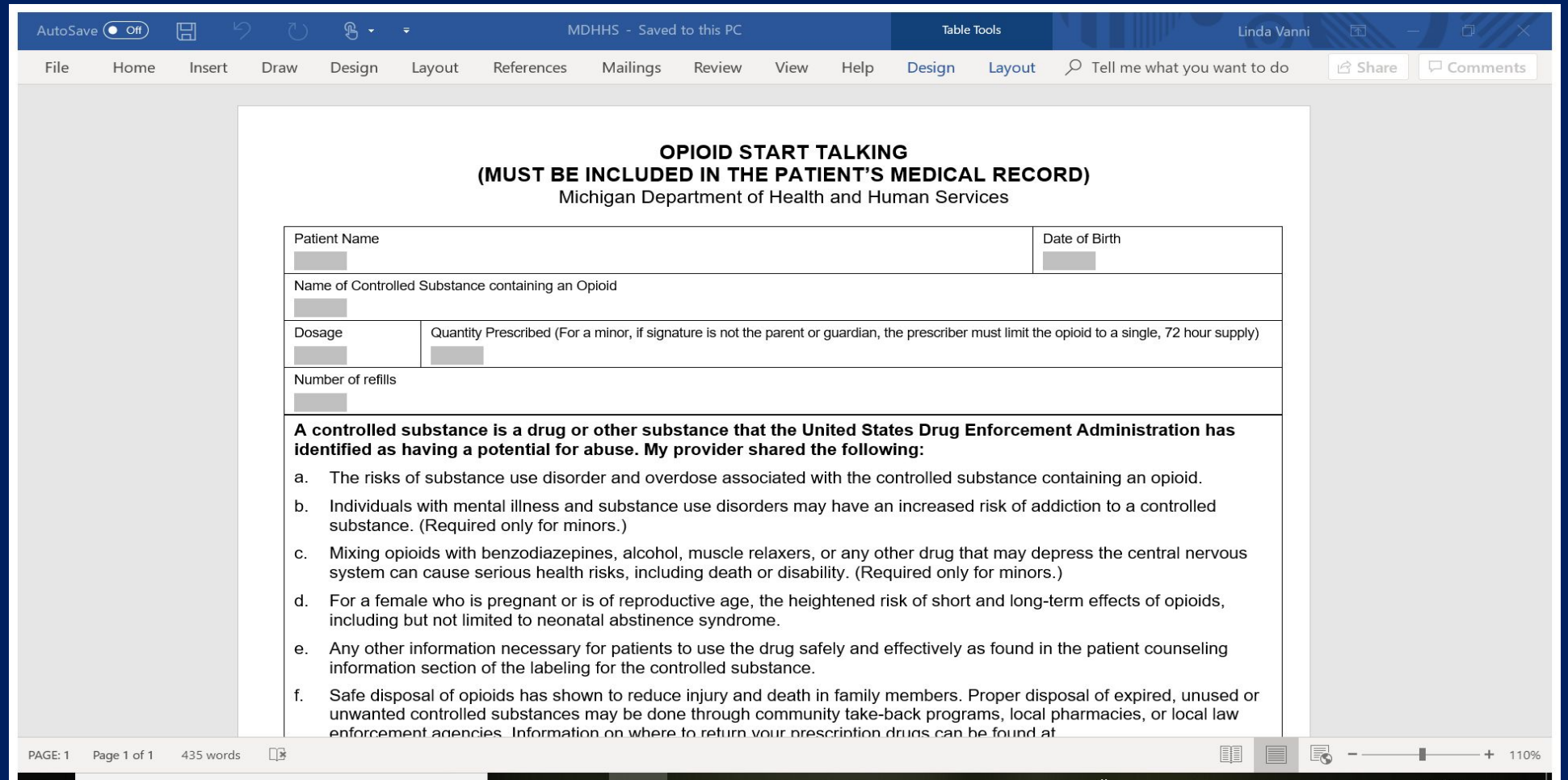
	Mark each box that applies	Item Score If Female	Item Score If Male
1. Family History of Substance Abuse			
Alcohol	☐	1	3
Illegal Drugs	☐	2	3
Prescription Drugs	☐	4	4
2. Personal History of Substance Abuse			
Alcohol	☐	3	3
Illegal Drugs	☐	4	4
Prescription Drugs	☐	5	5
3. Age (Mark box if 16 – 45)	☐	1	1
4. History of Preadolescent Sexual Abuse	☐	3	0
5. Psychological Disease			
Attention Deficit Disorder, Obsessive Compulsive Disorder, Bipolar, Schizophrenia	☐	2	2
Depression	☐	1	1

Calculate

https://www.practicalpainmanagement.com/author/18801/cheatle 2019

Required Opioid Education

PA 246 of 2017 requires prescribers to provide Opioid Education using the state's or similar Start Talking Form when prescribing an Opioid drug. It does not have to be used when prescribing any other controlled substance that does not contain an Opioid.



AutoSave Off | MDHHS - Saved to this PC | Table Tools | Linda Vanni

File Home Insert Draw Design Layout References Mailings Review View Help Design Layout Tell me what you want to do Share Comments

OPIOID START TALKING
(MUST BE INCLUDED IN THE PATIENT'S MEDICAL RECORD)
Michigan Department of Health and Human Services

Patient Name	Date of Birth
Name of Controlled Substance containing an Opioid	
Dosage	Quantity Prescribed (For a minor, if signature is not the parent or guardian, the prescriber must limit the opioid to a single, 72 hour supply)
Number of refills	

A controlled substance is a drug or other substance that the United States Drug Enforcement Administration has identified as having a potential for abuse. My provider shared the following:

a. The risks of substance use disorder and overdose associated with the controlled substance containing an opioid.

b. Individuals with mental illness and substance use disorders may have an increased risk of addiction to a controlled substance. (Required only for minors.)

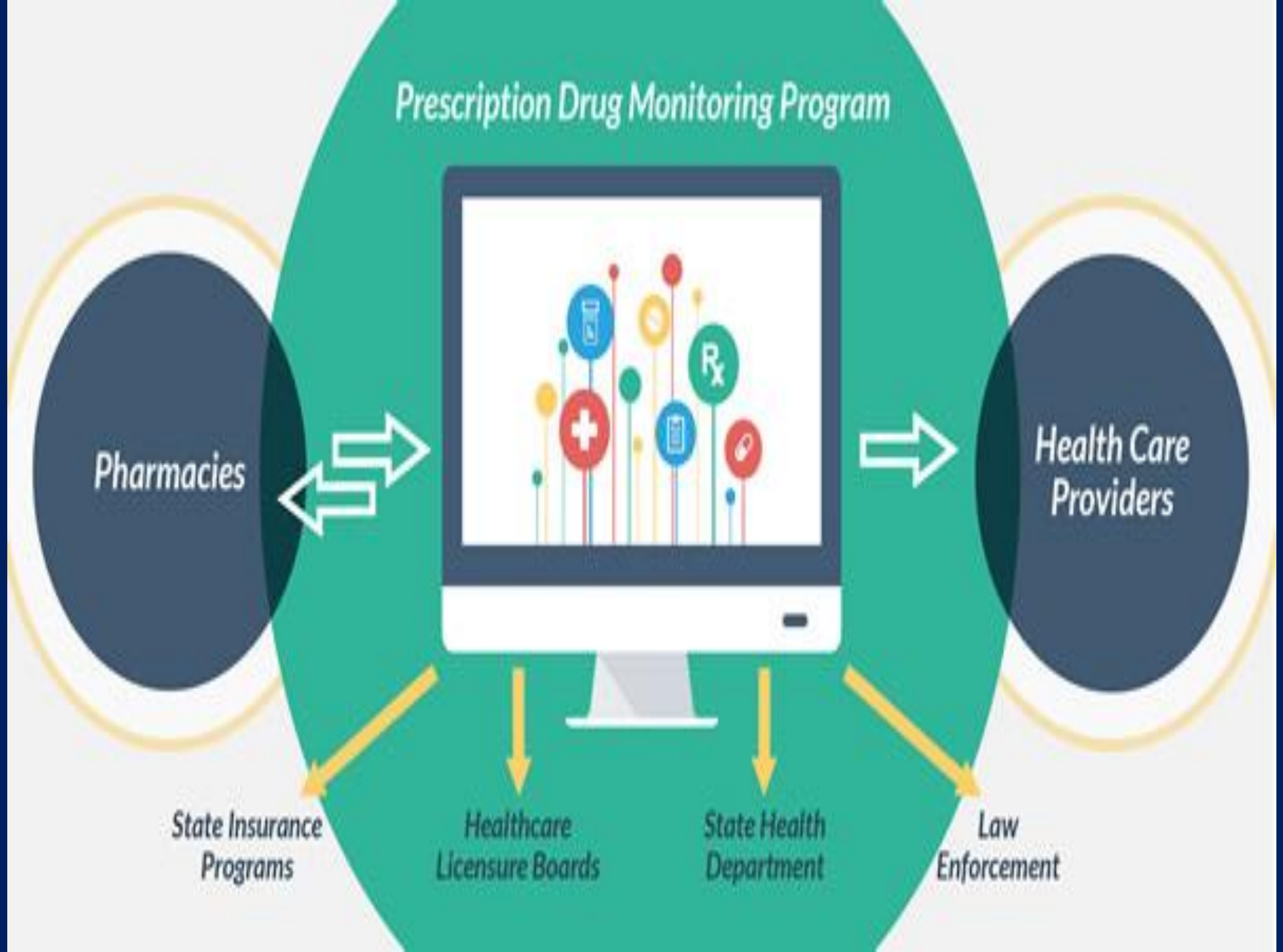
c. Mixing opioids with benzodiazepines, alcohol, muscle relaxers, or any other drug that may depress the central nervous system can cause serious health risks, including death or disability. (Required only for minors.)

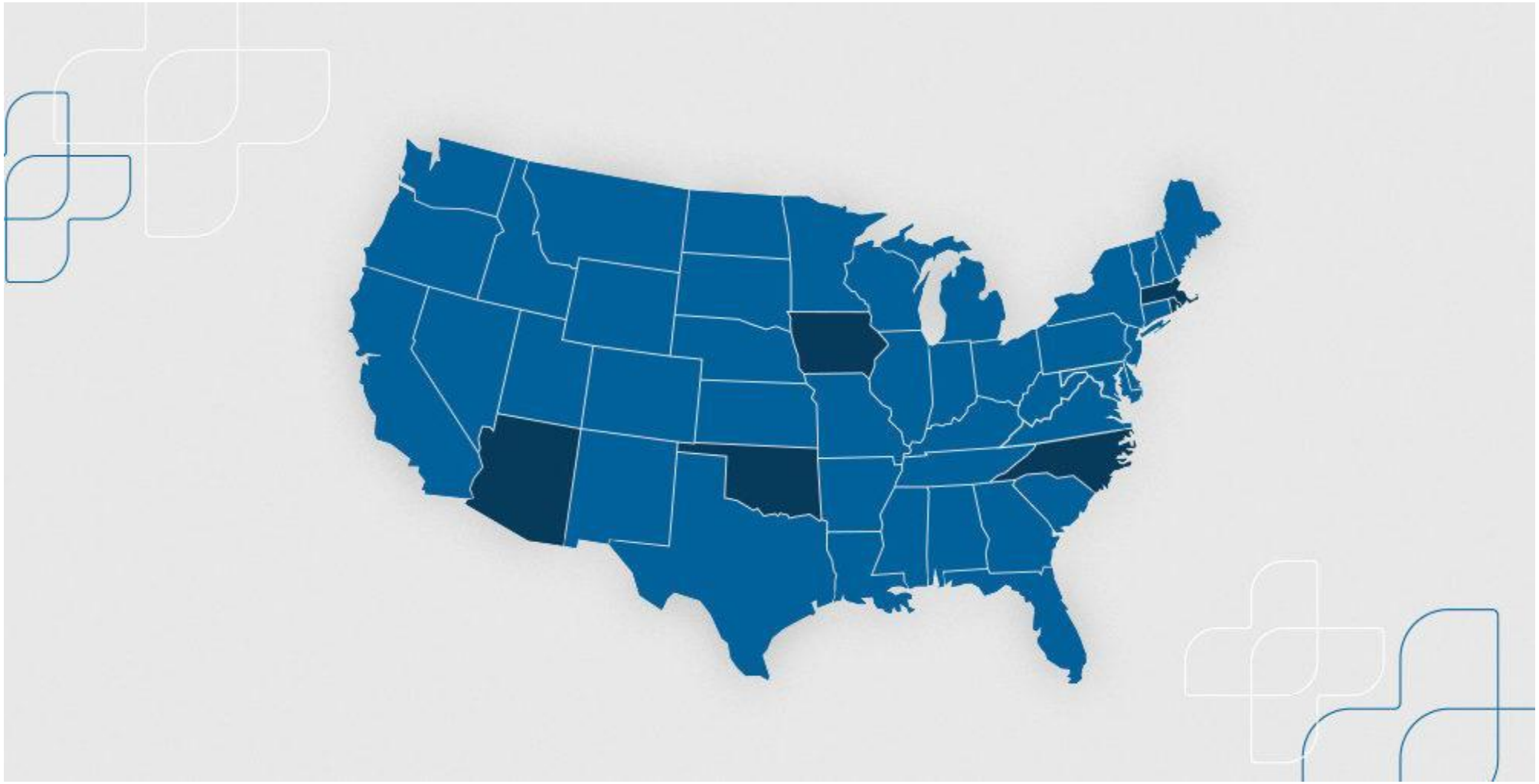
d. For a female who is pregnant or is of reproductive age, the heightened risk of short and long-term effects of opioids, including but not limited to neonatal abstinence syndrome.

e. Any other information necessary for patients to use the drug safely and effectively as found in the patient counseling information section of the labeling for the controlled substance.

f. Safe disposal of opioids has shown to reduce injury and death in family members. Proper disposal of expired, unused or unwanted controlled substances may be done through community take-back programs, local pharmacies, or local law enforcement agencies. Information on where to return your prescription drugs can be found at

PAGE: 1 Page 1 of 1 435 words 110%


Prescription Drug Monitoring Program
Pharmacies
Health Care Providers
State Insurance Programs
Healthcare Licensure Boards
State Health Department
Law Enforcement



Effective January 1, 2020, Arizona, Iowa, Massachusetts, North Carolina, Oklahoma, and Rhode Island, will require electronic prescribing for controlled substances (EPCS). This is part of an ongoing trend across the country, including a federal mandate that takes effect on January 1, 2021.

Research, Standards and Guidelines for Safe Clinical Practice

- AMA Opioid Task Force Helping Guide (August 2018 update)
- American Pain Society guidelines (2016)
- ANA Position Statement on Ethical Pain Management (2018)
- Numerous guidelines for special populations and conditions, ASPMN (2018)
- Revised Joint Commission pain standards (2018)
- CMS Guidelines, finalized (2018)

CDC Guidelines 2016

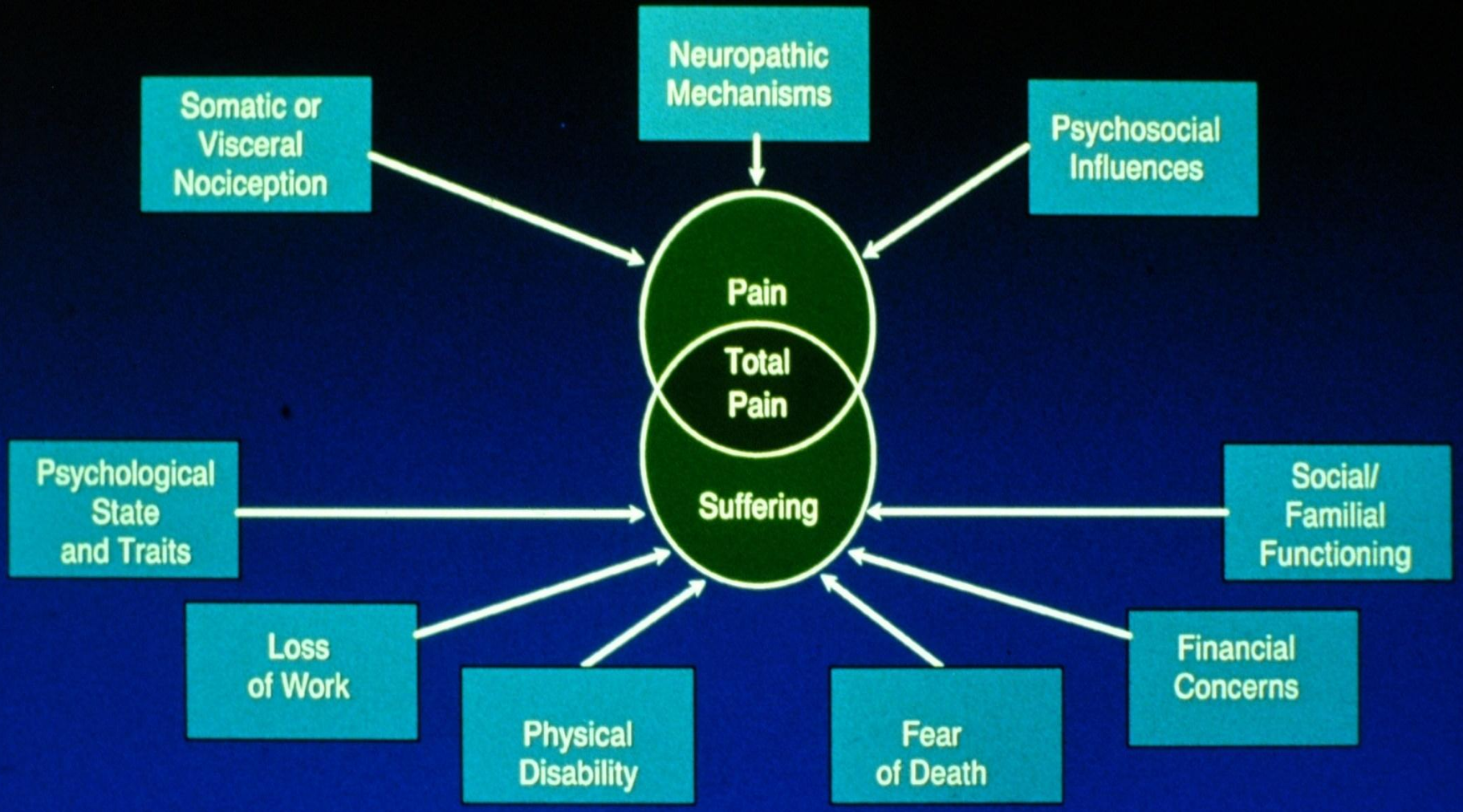
- Assess benefit to risk ratio for opioid use
- Give guidance for safe use and reassessment
- Have practitioners and patients examine risks and benefits together
- Recommendations:
  - Opioid therapy is not first line for chronic pain
    - Non-pharmacologic therapies, non-opioid therapies
    - **Multi-modal**
  - Establish realistic goals for pain and function
  - Discuss risks and benefits
  - Use immediate release opioids when starting
  - If opioids are used, start with lowest dose

CDC Guidelines Continued

- Set criteria for stopping or continuing opioids
- Prescribe short duration for acute pain
- Evaluate benefit and harm frequently
- Use urine drug testing
- Utilize PMP
- Offer treatment of opioid use disorders
- Avoid other sedating agents with opioid use
- Use strategies to mitigate risks
  - Naloxone
  - Concurrent use of benzodiazepines

Reassess in 1-4 weeks

Multifactorial Nature of Pain



(Adapted from Portenoy, 1988)

Definition of Pain

"Pain is whatever the experiencing person says it is, existing whenever he or she says it does."

- Margo McCaffery, R.N., M.S., FAAN (1968)

Challenges in Assessment

- Apply the Hierarchy of Pain Assessment Measures:

 First Step: Assess ability to provide self-report.

 Second Step: Use behavioral pain assessment tools if appropriate.

 Behavioral pain assessment *cannot determine intensity*.

 Third Step: Assume pain is present.

Assume Pain is Present

1. Unresponsive patients with underlying pathology thought to be painful (e.g., surgery, intubation, cancer).
2. Patients undergoing painful activities or procedures (e.g., turning, PT, wound care, ambulation) who are premedicated with the goal of preventing pain, increases potential for improved participation.

- Document pathology or activity.

Assessment

- Allergies
- Opioid naïve versus opioid tolerant
- Previously effective pain medication
- Under lying medical conditions
- Sleep apnea/CPAP?/obese/neck circumference?
- Multiple surgeries
- History of issues
- Current medications (excellent clue)
- Red flag medications

Comprehensive Pain Assessment

- Location
- Quality; descriptions
- Pain intensity
- Onset, duration, variations
- What relieves; what aggravates
- Effects of pain; goal achievement

 Assess during rest and activity

 All about Function!

All about Function

- Patient examinations in physical therapy include, but are not limited to, testing of muscle **function**, **strength**, joint **flexibility**, range of motion, **balance** and **coordination**, posture, respiration, skin integrity, **motor function**, quality of life, and **activities** of daily living.

- Occupational therapy practitioners enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with—injury, illness, or disability.

- To all the healthcare professionals practicing in the Rehab specialty including nurses, case managers, physical therapists, occupational therapists, and social workers.

Assessment

- The gold standard of pain management assessment is the patient self report on a pain scale from 0 to 10
- The goal of pain management is an awake, alert, functional patient

- Determine if patient is opioid naïve or opioid tolerant

  Opioid Naïve: Patients who do not meet the definition of opioid tolerant.
  Opioid Tolerant: Patients who are taking at least 60 mg of oral morphine/day, 25 mcg transdermal fentaNYL/hour, 30 mg oral oxyCODONE/day, 8 mg oral HYDROmorphone/day, 25 mg oral oxymorphone/day or an equianalgesic dose of another opioid for one week or longer.

- Set realistic expectations from the beginning, sit down with the patient, evaluate if the patient is currently having pain

  - Nursing will document a pain score and perception of comfort in the patients electronic record for every patient

- Excellent pain management utilizes adjuvant therapies

Chronic versus Acute Pain

Pain can be categorized as one of the following: Acute, Chronic, or Acute on Chronic

Acute Pain: recent onset (<3 months), transient & usually from an identifiable cause

Chronic Pain: ongoing or recurrent pain (>3-6 months), lasts beyond the usual course of acute illness or injury healing and adversely affects the individual's well-being.

Treatment for the type of pain includes multiple modalities

Look at the patient's functional goals when creating a pain management plan

Each patient's pain is unique, begin with a thorough assessment

Patient descriptors will aide in the form of intervention based on pain type

Chronic Versus Acute Pain

- Chronic pain in the hospital setting is usually not an acute process precipitated by the patient's illness, it is a long standing condition
- An acute pain process can occur in the chronic pain patient and needs to be aggressively addressed
- We can address acute pain issues based on the patients' current medications and risks/benefits of introducing new medications
- It is not our role to judge or manipulate the patient's current chronic pain management plan
- We must ensure we provide the patient with their pre-hospital medications as prescribed
- Discussions about pain perception and acceptable comfort level are just as important in these patients

Types of Acute Pain

- ***Visceral***
- ***Bone/Somatic***
- ***Neuropathic***
- ***Combination***
- ***Surgical***

Different Types of Pain

Somatic – localized pain in skin, muscle, bone described as aching, stabbing, throbbing

- Therapies for somatic pain include NSAIDs (prostaglandin inhibitors), acetaminophen (works centrally), muscle relaxants, ice, and heat

Visceral – non-localized pain in organs or viscera described as gnawing, cramping, aching or sharp

- Therapies for visceral pain include opioids (occupies opioid receptors), and interventional therapies

Neuropathic – pain caused by nerve damage described as sharp, numbness, burning or shooting

- Therapies for neuropathic pain include antidepressants (inhibits norepinephrine and serotonin re-uptake), anticonvulsants (blocks voltage-dependent calcium channels), local anesthetics, and interventional therapies **caution: anticonvulsants can cause dizziness, potential for falls. Start low and go slow!**

- Opioids are not the first-line medication choice for somatic or neuropathic pain

These types of pain can occur individually or in combination

Facilitating Transduction

- **Biochemical mediators: "Chemical Soup"**

Prostaglandins
Bradykinins
Serotonin
Histamines
Cytokines
Leukotrienes
Substance P
Norepinephrine

Definition of Multi-Modal Therapy for Pain Management

- A rational approach to pharmacologic therapy is to consider a drug's mechanism of action and the source or type of pain. Multimodal analgesia refers to the use of more than one agent from different pharmacologic analgesic classes that target different mechanisms of CNS or PNS pain.
  ANA, 2011
- A multimodal approach to pain management (using two or more different methods or medications to manage pain) rather than using opioids alone.
  ASA, 2018

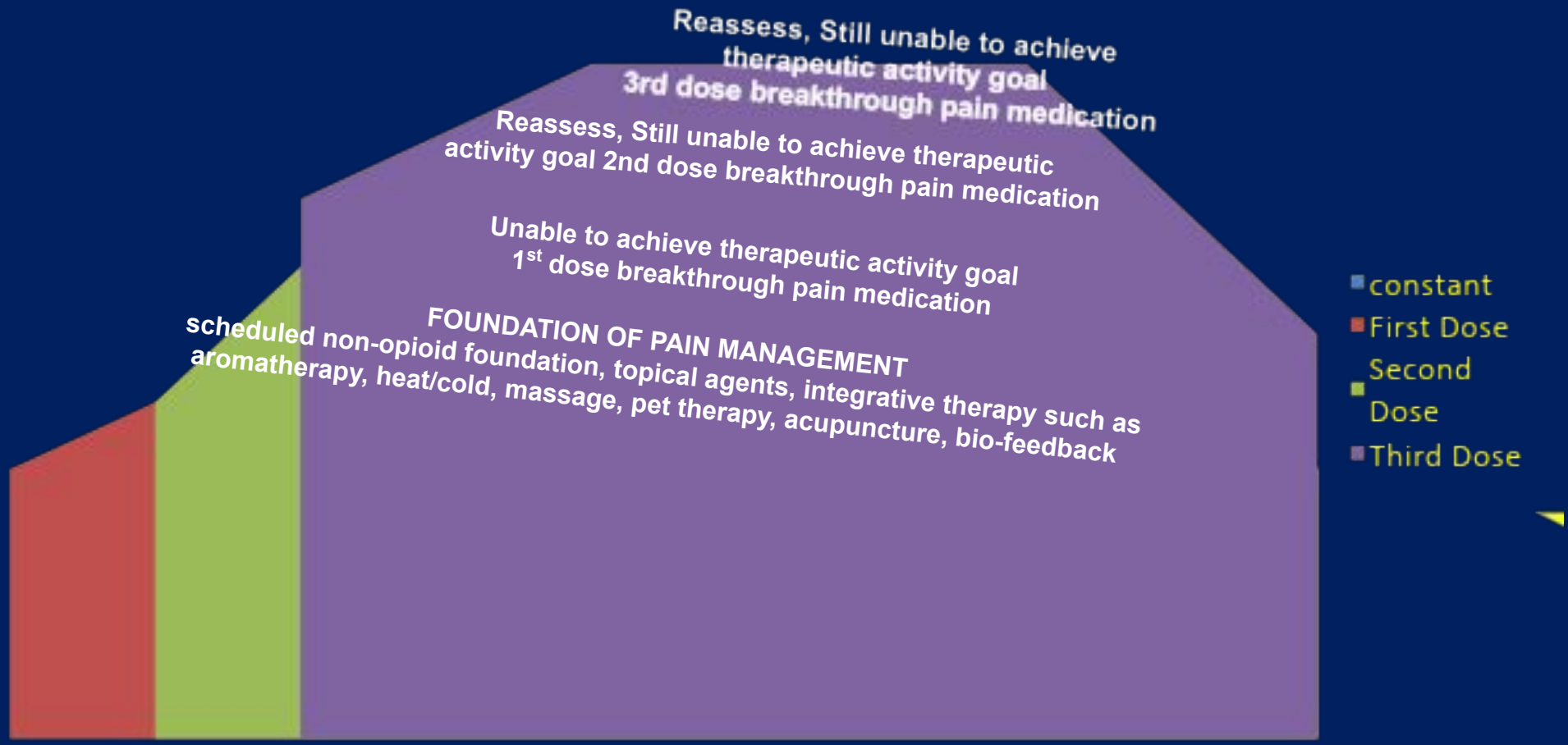
Goals of multimodal analgesia:

- Improve analgesia quality
- Achieve more balanced analgesia
- Reduce adverse events

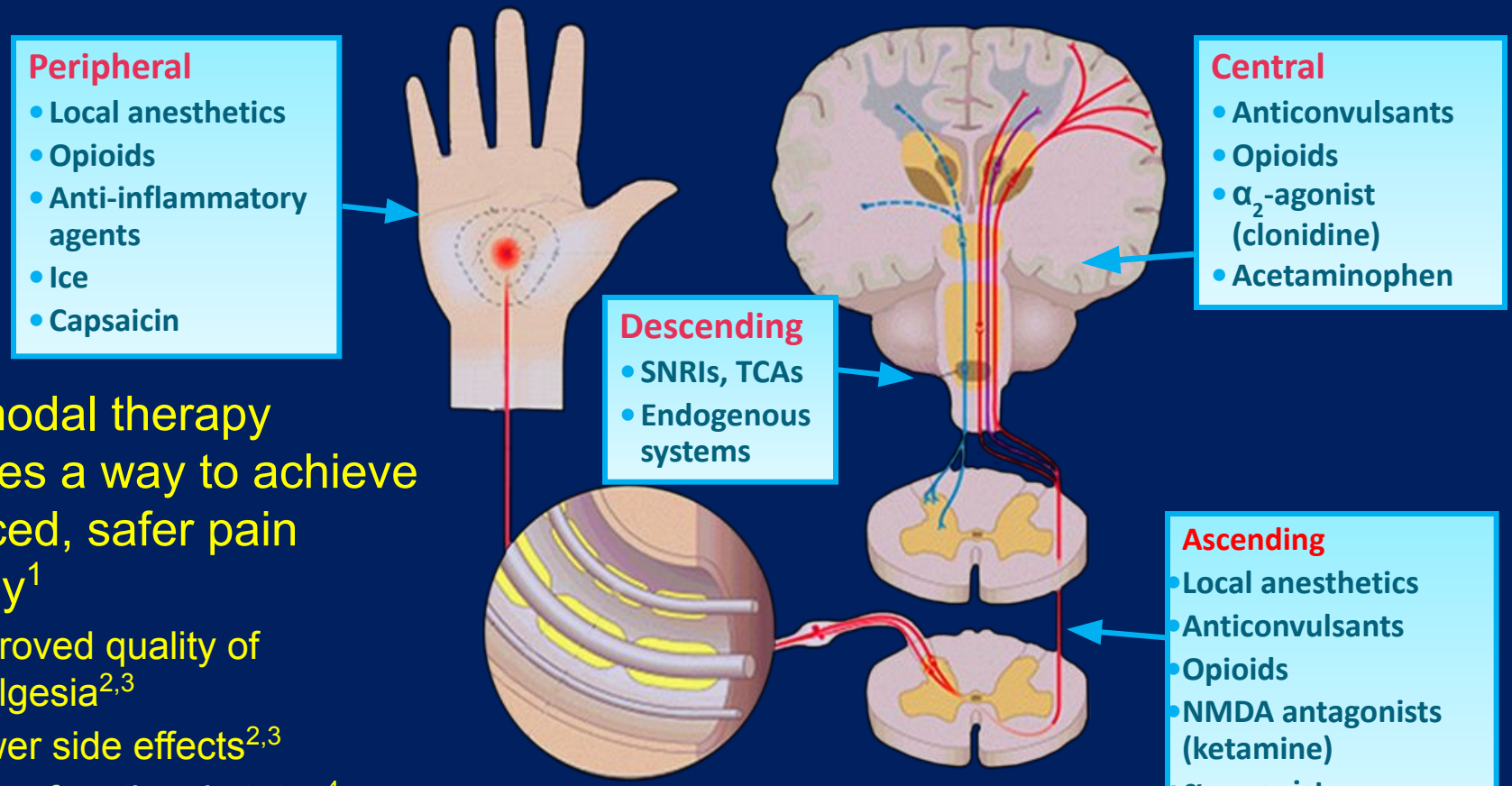
Galloway, 2011

- Opioid-sparing
- Differences between multimodal, integrative, alternative pain management

Multimodal Pain Management Plan



Multimodal Therapy: Clinical Advantages



- Multimodal therapy provides a way to achieve balanced, safer pain therapy[1]
  - Improved quality of analgesia[2,3]
  - Fewer side effects[2,3]
  - Better functional status[4]

1. Gottschalk A, Smith DS. *Am Fam Physician.* 2001;63:1979-1984, 1985-1986.
2. Tiippana EM, et al. *Anesth Analg.* 2007;104:1545-1556.
34. Basse L, et al. *Brit J Surg.* 2002;89:446-453.

Adjuvants

- Tricyclic antidepressants
- Anticonvulsants
- Muscle relaxants
- NSAIDs
- Benzodiazepines
- Local Anesthetics

Adjuvant Analgesic Medications

Drug Class	Medication Examples	Use	Clinical Pearls
Antidepressants	Amitriptyline Nortriptyline	Neuropathic Pain	SE: dry mouth, drowsiness, constipation, orthostatic hypotension, urinary retention, confusion. Obtain baseline EKG with history of cardiac disease
SSRI/SNRI Antidepressants	Duloxetine (Cymbalta)	Diabetic peripheral Neuropathy	Should not use with MAOI's (ex. Zyvox). Consider lower starting dose for patients for whom tolerability is a concern.
Antiepileptics	Gabapentin (Neurontin) Pregabalin (Lyrica)	Neuropathic Pain	Adjust Dose for renal Dysfunction. Pregabalin is similar to gabapentin, sometimes more rapid response than gabapentin.
Topical Preparations	Lidoderm patch (topical Lidocaine) Diclofenac Patch	Lidoderm- Neuropathic Pain Diclofenac- Bone Muscle pain	Patch may be cut to fit painful areas. Place only on skin that is clean, dry and intact.
Muscle Relaxants	Baclofen (Lioresal) Methocarbamol (Robaxin)	Muscle Spasm	Gradually increase in 2-4mg increments over 4 weeks.
NSAID	Ibuprofen Naproxen Ketorolac celecoxib	Mild to moderate pain.	Use extreme caution in elderly, cardiac disease, renal dysfunction, and GI bleeding.

The Shifting Paradigm

- All about multi-modal
  - Scheduled acetaminophen
- Pain Management always linked to function
- Opioid-sparing
- The future of topicals
- Integrative therapies
- Always keeping it safe

Anticonvulsants

1) Inhibit sustained high-frequency neuronal firing by blocking Na+ channels after an action potential, reducing excitability in sensitized C-nociceptors.
2) Blockade of Na+ channels and increase in synthesis and activity of GABA, in inhibitory neurotransmitter, in the brain.
3) Modulates Ca+ channel current and increases synthesis of GABA.

(Vallerand, Sanoski & Deglin 2012)

Acetaminophen

- Analgesic, antipyretic
- Well tolerated
- Used for both acute and chronic pain (Pros)
- Used to treat osteoarthritis
- Maximum dose 4000 mg/day, except w/ ETOH
- Inhibits prostaglandin synthetase in the CNS, weak peripheral anti-inflammatory activity, centrally acting, Reinforces the descending inhibitory serotonergic pain pathways (proposed)
- Risk of hepatotoxicity with higher doses, multiple combo products (Cons)
- Renal failure dosing based on creatinine clearance
- Moderately dialyzable
- Antidote – acetylcysteine (Mucomyst, Acetadote)

SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	*Evidence rating*	*References*
Acetaminophen is the first-line treatment for most mild to moderate acute pain.	A	8, 18
Ibuprofen and naproxen (Naprosyn) are good, first-line NSAIDs for mild to moderate acute pain based on effectiveness, adverse effect profile, cost, and over-the-counter availability.	A	12, 13
Cyclooxygenase-2 selective NSAIDs are second-line medications for mild to moderate pain based on their similar effectiveness to nonselective NSAIDs and greater costs.	A	13
Celecoxib (Celebrex) alone and an NSAID plus a proton pump inhibitor have the same probability of causing gastrointestinal complications in those at high risk.	B	26, 27
Full opioid agonists may be used if opioids combined with acetaminophen or NSAIDs are insufficient to control moderate to severe pain.	A	14, 15, 31
Tramadol (Ultram) is less effective than hydrocodone/acetaminophen and is a second-line medication for the treatment of moderate to severe pain.	B	16, 39

NSAID = nonsteroidal anti-inflammatory drug.

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to http://www.aafp.org/afpsort.xml.

OTC NSAIDs – Awareness of Patient Self-Medication

- NSAIDs ceiling effect must be monitored to avoid toxicity
- Combining NSAIDs increases potential adverse effects, which include:
  - Hepatic dysfunction
  - Bleeding
  - Gastric ulceration
  - Renal failure
- Patient education required for this important class of OTC drugs

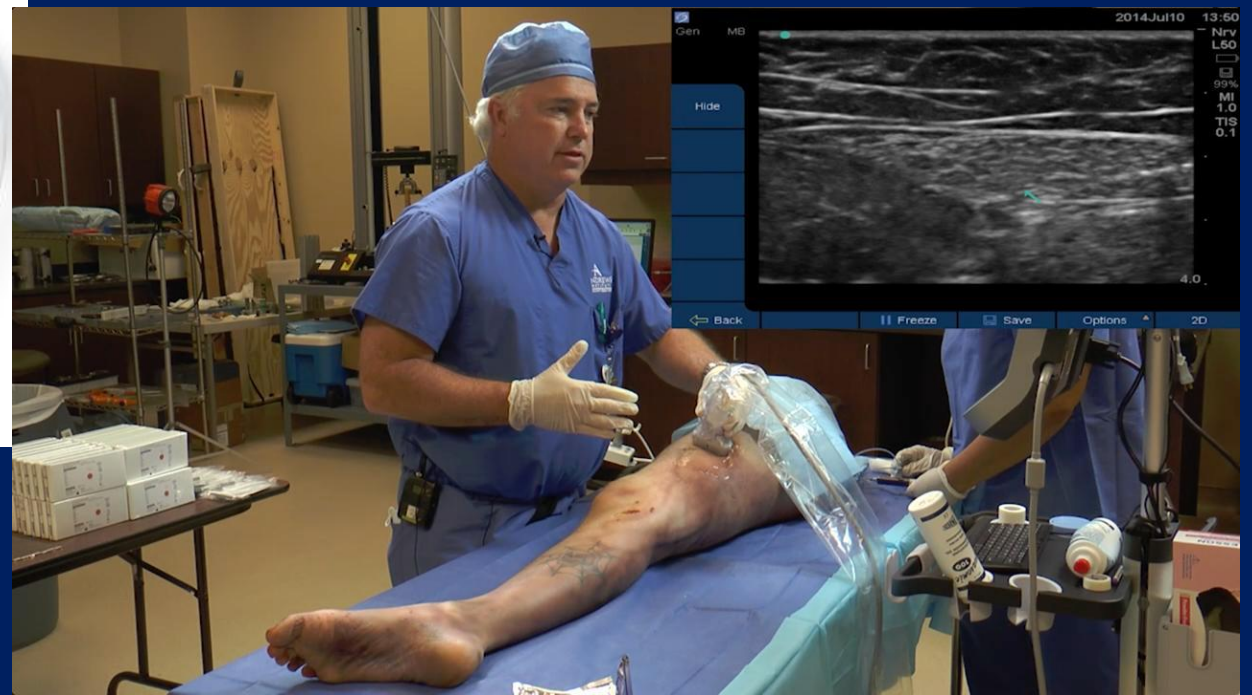
Jacox et al (eds.). *Management of Cancer Pain. Clinical Practice Guidelines.* No. 9. 1994.

NSAIDs and CV Risk
Paauw, D.S., 6/23/2017

- US Food and Drug Administration, 7/2015
- Longer acting NSAID, bigger risk for HF
- Decrease renal excretion of Na+ and water
- Short term use risk: increased risk of death and recurrent MI in patients with prior MI
- No history MI: Wen,YC, et al (2017), increased risk for MI-three fold when tx resp. infection, parenteral NSAIDs, seven fold
- Risk benefit ratio

Local Anesthetic Infusions

- Breakdown of cartilage at delivery catheter site and variability of dose infusion (Cons)
- Must be placed by skilled personal pre-op (Con)
- Excellent pain relief (Pro)



Capsaicin

- Hot peppers
- May deplete & prevent re-accumulation of substance P in primary afferent neurons responsible for transmitting painful impulses from peripheral sites to the CNS.
- Absorption, distribution, metabolism & excretion, half life – unknown
- May produce transient burning with application, usually disappears in 2-4 days, but may persist for several weeks.

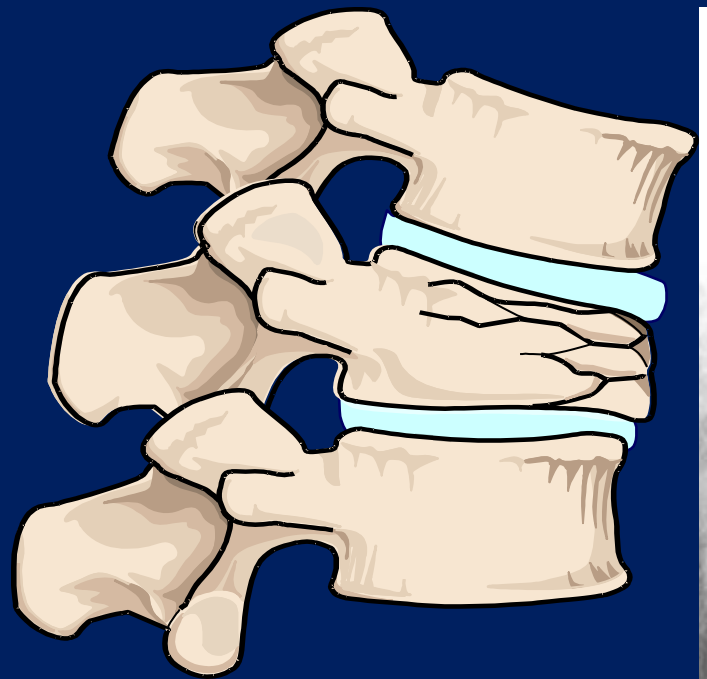
Interventional Pain Management

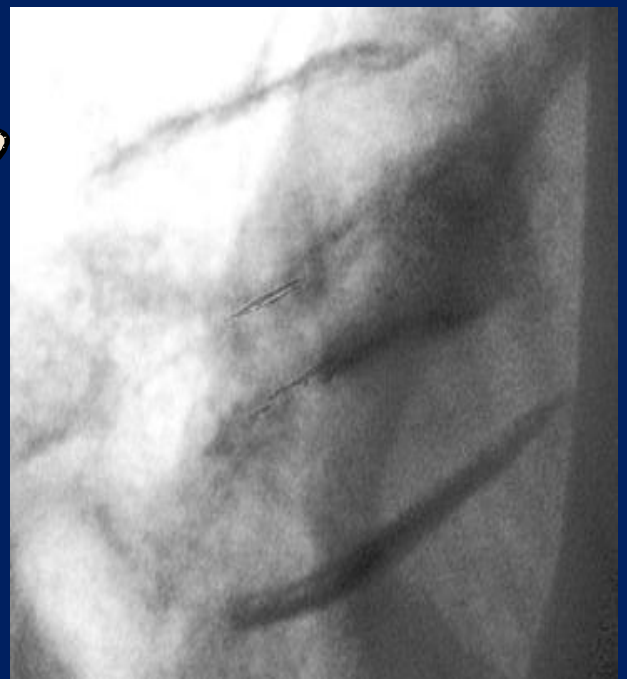
- Interventional procedures are therapeutic options for managing cancer pain that is uncontrollable by conventional pharmacotherapy and/or patient is experiencing uncontrollable side effects.
  - **Nerve blocks**
  - **Neuromodulation**
    - **Intraspinal**
  - **Vertebral compression fracture stabilization**
  - **Neurosurgical intervention**
  - **Opioid sparing**

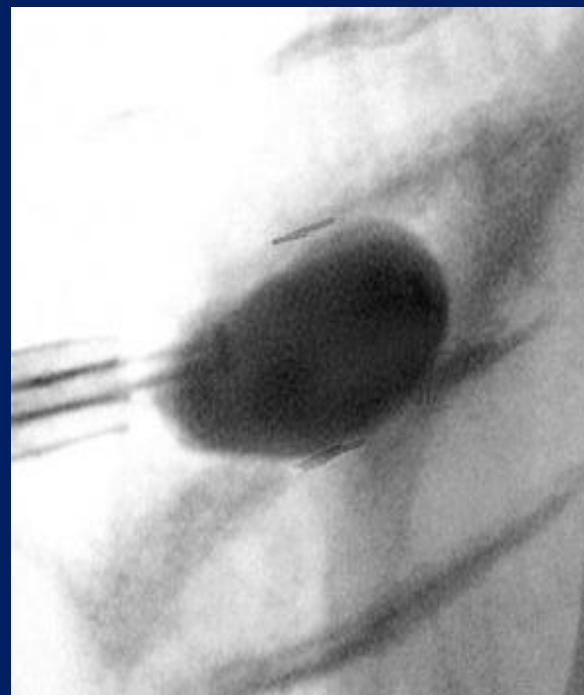
VCFs

Balloon Kyphoplasty Treatment Goals

- Aimed at restoring height and stability in fractured vertebral body
- Treating pain related to vertebral collapse







Irritable Bowel Syndrome (IBS)
Bristol Stool Form Scale

Stool Form	Appearance	Type	
Separate hard lumps, like nuts (hard to pass). Results from slow transit		1	True constipation
Sausage-shaped but lumpy		2	
Like a sausage but with cracks on its surface		3	
Like a sausage or snake – smooth and soft		4	Ideal normal
Soft lumps with clear cut edges (easy to pass)		5	
Fluffy pieces with ragged edges		6	
Watery, no solid pieces. Results from very fast transit		7	True diarrhea

NOVARTIS

Subcutaneous Methylnaltrexone

New Drug Application filed 5/30/07, approved in 2008

- For treatment of opioid-induced constipation in patients receiving palliative care
- Peripherally acting mu-opioid receptor antagonist
- <u>Without interfering with pain relief</u>
- Single use, pre-filled syringes introduced 2010
- Phase III, oral formulation development for chronic, non-cancer pain patients
- Patents and applications expirations ranging from 2017-2031

Medical and Recreational Marijuana Use

Marijuana in all forms is a DEA, Scheduled C-I drug, is federally illegal and for that reason is always prohibited in the long-term care setting. This applies even if the patient has a state of Michigan Medical Marijuana card. This includes edibles.

Guidelines

- “Start low and go slow”
  - Use longer dosing intervals
  - Use smaller doses
- Pharmacologic therapy is most effective when combined with nonpharmacologic therapy
- Acetaminophen
  - First line therapy
  - Consider ATC dosing
  - 3-4 grams/24hrs from all sources
- Nonsteroidal anti-inflammatory drugs
  - Should be used with caution
  - Short term

Beer's Criteria

Created in 1991 to improve safety of med therapy in older adults

Potentially inappropriate medication

- All classes of medications
- Evidence-based, graded tool
- Assists health care providers in improving medication safety in the geriatric patient
- Covers side effects and potential adverse effects
  - TCAs: strong anticholinergics
  - NSAIDS: high rate of GIB in pts receiving for 3-6 months

Thank you very much!

Questions???