PRIMA'S 2018 RISK MANAGEMENT
WEBINAR SERIES

Opioid Addiction

Dr. Fernando Branco

Chief Medical Officer

Midwest Employers Casualty

a W.R. Berkley Company

Today's Presenter

Dr. Fernando Branco

- 31 years experience in rehabilitation and pain management
- Board certified in physical medicine and rehabilitation, pain management and addiction medicine
- Member of the American Pain Society, American Board of Pain Medicine
- Extensive research on spinal cord injury and sexual dysfunction, exercise physiology, pain medicine
- Member of the Opioids for ACOEM Guidelines

Conundrums of Chronic Pain Care

- Avoid use of Narcotics
- Functional Restoration
- Return to Work/Work Ready
- Treat Psychosocial and Physical Problems
- Avoid Overuse of Interventional Treatments
- Reduce Costs

Goals of Treatment

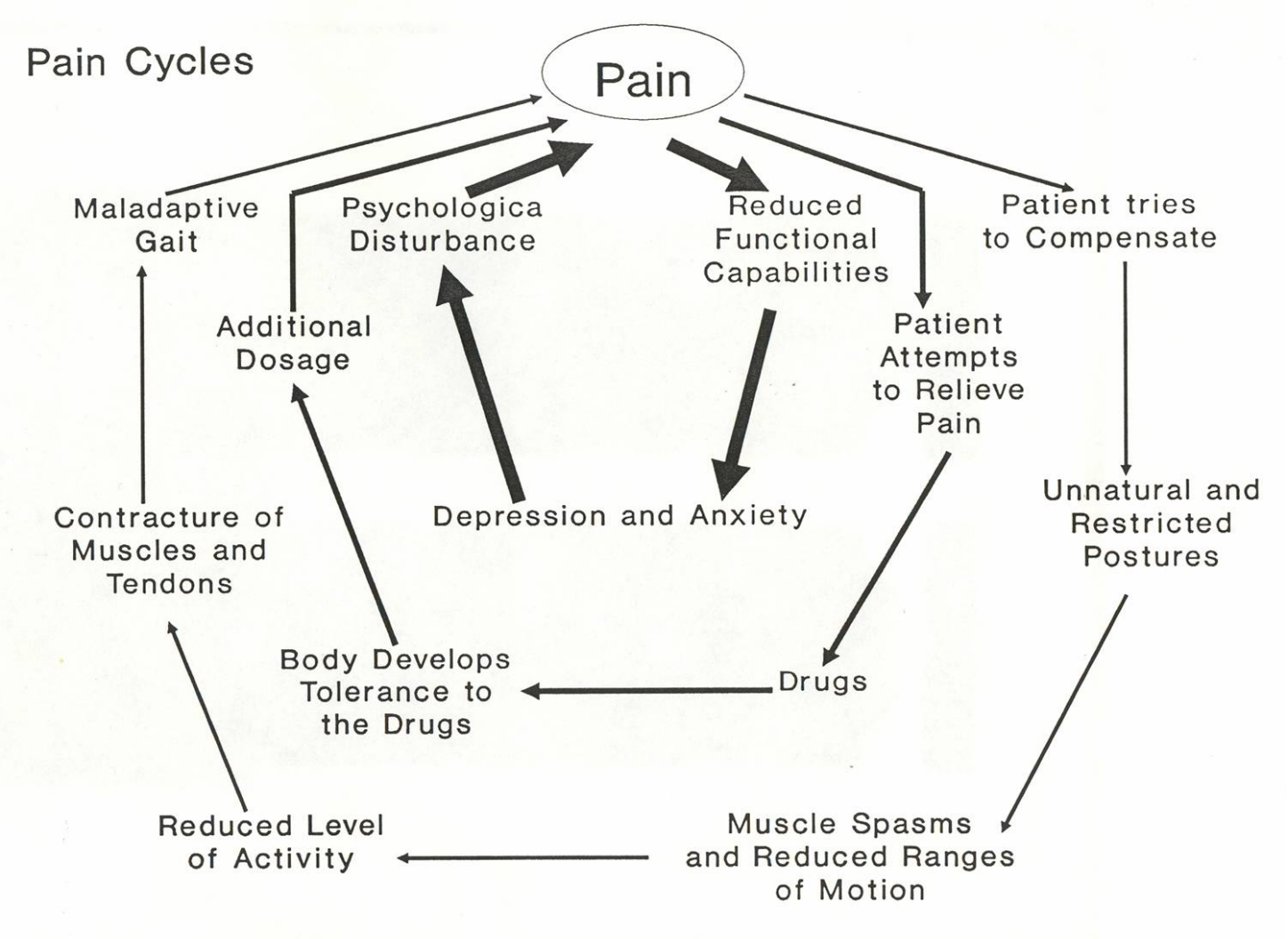
- Improve quality of life
- Restore optimum levels of function
- Reduce or eliminate pain
- Reduce or eliminate addictive pain medications
- Enable become independent of the healthcare system (related to pain)
- Reduce costs



PAIN

- Can’t see it
- Can’t measure it
- Can’t diagnose it on x-ray or MRI
- 75% of general population will have abnormal MRIs – bulging or herniated discs or narrowing…..and
  NO PAIN

Pain Cycles


Pain Cycles
Pain
Maladaptive Gait
Psychologica Disturbance
Reduced Functional Capabilities
Patient tries to Compensate
Additional Dosage
Patient Attempts to Relieve Pain
Contracture of Muscles and Tendons
Depression and Anxiety
Unnatural and Restricted Postures
Body Develops Tolerance to the Drugs
Drugs
Reduced Level of Activity
Muscle Spasms and Reduced Ranges of Motion

Negative Convictions

- Medication Conviction
- Disability Conviction
- Disease Conviction
- Helplessness
- Enabling Behavior
  - From Doctors
  - From Family

Drug Addict? Drug Abuse?

Excessive use of a drug for purposes for which it is not medically intended.



The Risk of Addiction

- Known risk factors for addiction to any substance are good predictors for opioid abuse

1. Past cocaine use, h/o of alcohol or cannabis use
2. Lifetime history of substance use disorder
3. Family history of substance abuse, history of legal problems and drug and alcohol abuse
4. Tobacco dependence
5. History of severe depression and anxiety

Ives et al 2006; Reid et al 2002; Michna et al 2004; Akbik et al 2

Addiction is

- A primary, chronic, neurobiological disease with genetic, psychosocial and environmental factors influencing its development and manifestations

- A clinical syndrome:
  - Loss of control
  - Compulsive use
  - Continued use despite harm
  - Craving

Pseudoaddiction

- Opiophobia
- Overestimate potency and duration of action
- Fear of being scammed
- Fear of addiction potential

Morgan J 1985
Smith 1989

Yellow Flags

- Complaints of more medications needed
- Drug hoarding
- Requesting specific pain medications
- Openly acquiring similar medications from other providers
- Occasional unsanctioned dose escalation
- Nonadherence to other recommendations for pain therapy

Passik SD Mayo Clinic Proc 2009

Red Flags

- Deterioration in functioning at work and socially
- Illegal activities – selling, forging, buying from nonmedical sources
- Injecting and snorting medication
- Multiple episodes of “lost” or “stolen” scripts
- Resistance to change therapy despite adverse effects
- Refusal to comply with random drug screens
- Concurrent abuse of alcohol or illicit drugs
- Use of multiple physicians and pharmacies

Passik SD Mayo Clinic Proc 2009

Opioid Labels

- Opioid Addiction
- Opioid Tolerance
- Opioid Physical Dependency
- Opioid Emotional Dependency
- Substance Use Disorder
- Hyperalgesia induced by opioids

Narcotic Cycle

Patients need higher doses to achieve results = TOLERANCE

Eventually lack of pain relief may lead to steady increases in amount and types of pain medication

Long term use of narcotics leads to “OPIOD INDUCED ABNORMAL PAIN SENSITIVITY”

Eliminate production of your own body's ENDORPHINS

Shut the endorphin system down

Lead to HYPERalgesia and HYPERsensitivity to pain

Publications

Opioid-induced hyperalgesia: pathophysiology & clinical implications: Journal of Opioid Management 2008

Opioid induced abnormal pain sensitivity – Current Pain Headache Report 2006

Adverse effects of chronic opioid therapy for chronic musculoskeletal pain – National Rev of Rheumatology 2010

Hyperalgesia in opioid-managed chronic pain and opioid-dependent patients – Journal of Pain 2009

Serious Side Effects

- Narcotics slow down the action of the bowel / intestines resulting in severe constipation almost always requiring another medication to help relieve this symptom
- Urinary retention or Urinary Incontinence
- Hypogonadism – decreased sex drive, erectile dysfunction – often requires need for additional meds



Serious Side Effects

- Testosterone therapy
- Hypopituitarism - sex hormone abnormalities (FSH/LH) male and female, Growth Hormone (increased weight, decrease in muscle mass), Adrenal (Fatigue), TSH (weight gain, hair loss, fatigue, intolerance to cold)



Medications/Procedures for Opioids Side Effects

- Androgel, Levitra, Cyalis, Viagra
- Synthroid
- Tooth Implants
- Amphetamines – Ritalin, Adderall
- Upper: Nuvigil (armodafinil)
- Sleep Meds: Lunesta
- Antidepressants: Pristiq (Desvenlafaxine) – metabolite of venlafaxine (Effexor, Effexor ER)
- Opioid Induced Constipation (OIC) – Movantik. Amitiza

“New” and “Improved” Medications

“New” Narcotics

“Improved” Medications

New Generation Pain Medications – Tanezumab

“New” Narcotics

1. Embeda – 2014 – Morphine ER/Naltrexone
2. Exalgo - 2010 – Hydromorphone ER
3. Xartemis XR – 2014 – Oxycodone ER/Acetaminophen
4. Zohydro ER – 2014 – Hydrocodone ER
5. Nucynta ER – Tapendolol ER
6. Butrans patch – buprenorphine
7. Fentanyl 40-50x more potent than heroine – Duragesic (patch), Fentora (oral mucous), Actiq (oral), Subsys (Buccal spray)

Abuse-Deterrent Formulation (ADF)

- Suboxone – Buprenorphine/Naloxone
- Embeda – Morphine/Naltrexone
- Exalgo - Osmotic extended-Release Oral delivery System (OROS) of hydromorphone
- Opana (Oxymorphone ER)
- Oxycontin (Oxycodone ER)
- Oxecta (Oxycodone IR)
- Dozens in the approval process by FDA

Replacement Therapies

- Patient will need detoxification sooner or later
- Methadone
- Buprenorphine products
- Patient Characteristics
  - On high doses of opioids predominantly
  - Indicated for addiction; very limited as a pain “solution”
  - Motivated to wean off current meds
  - Low to medium psychosocial issues
  - Good community social support for plan

Replacement Therapies

- Detoxification Process
  - Relatively fast, subsequent taper is slow
  - Functional restoration, cognitive behavioral therapies, support groups (AA, NA)
  - Lower risk of abuse if no other meds prescribed
  - Pain complaints likely to continue
  - Inpatient or outpatient detoxification will be needed

Reaction to Overdose Epidemic

- Naloxone and naloxone like drugs prescribed as life savers
- Multiple doses???
- First responders – Fentanyl issue
- Opiophobia
- True social shift

Compound Medications

- **Started on 2000, before only Dermatologists**
- **Can cost 20-30 k/year**
- **Doctor dispensing – Compound Kits – VOPAC Ketoprofen/Lidocaine**
- **Physician dispensing – unique to WC**
- **No evidence of efficacy, minimal research**
- **Very high cost**
- **CMS mostly does not consider on MSA calculation at this time**
- **Price based on Active Pharmaceutical Ingredients (API) – not generic or brand , as such no fee schedule**

Compound Medications

- **Most commonly used:**

1. **Ketamine**
2. **Gabapentin**
3. **Flurbiprofen (NSAID)**
4. **Fluticasone powder (Corticosteroid) – total spent, the highest**
5. **Ketoprofen (NSAID)**
6. **Diclofenac (NSAID)**
7. **Baclofen**
8. **Meloxican**
9. **Cyclobenzaprine**
10. **Tramadol**

Antipsychotics for pain

- Abilify – most expensive one, AWP increased by 18% in one year, generic available
- Serious side effects

“Improved” Medications

Vimovo – Naproxen (Aleve) and Esomeprazole (Nexium)

Duexis – Famotidine (Pepcid) and Ibuprofen (Motrin)

Naprelan – Controlled release Naproxen

Zipsor – Diclofenac potassium

Zorvolex - Diclofenac

Amrix – Cyclobenzaprine ER

Fexmid – Cyclobenzaprine 7.5 mg

Gralise - Gabapentin

New Generation Pain Medications – Tanezumab

- NGF Blockers – Monoclonal Antibody
- Nerve pain only
- By infusion every 8 weeks
- Lilly and Pfizer – 10 billion deal
- Side effects – lymphedema, osteonecrosis – significant enough to delay release by FDA

Ketamine Infusions

- Down regulation of the N-Methyl D Aspartate Receptor (NMDAR), one of possible culprits of neuropathic pain
- Also acts on opioid receptors
- Possible antidepressants effect
- Has psychotropic and psychedelic effects: auditory allucinations, paranoid ideas, panic attacks, inability to control thoughts, derealization in time and space, euphoria
- Also dizziness, blurred vision, vertigo, nausea, dysphagia, nystagmus, memory deficits, vivid dreams, elevated HR
- Ketamine has been used to induce Schizophrenia like state on normal individuals in past research
- Clonidine and benzos used to control above symptoms

Ketamine Infusions

- Causes psychological but not physical dependency, no withdrawals
- Schedule III drug in US
- K-Hole – recreational use, schizophrenia like symptoms
- Oral and transmucosal preparations are coming
- Nothing with Ketamine is standard, proved safe or efficacious: infusion solutions, duration, frequency, long-term safety

Genetic Testing

- Increased trend
- Expensive
- May push for specific medications
- Literature is minimal with very little unbiased studies available
- Doctors can use it to determine treatment with uncertain results

Effective Treatment

- Return to the basics:
  - Physical and Psychological Rehabilitation
  - Physical Medicine
  - True Multidisciplinary Approach
- What is the definition of insanity?
  "The definition of insanity is doing the same thing over and over and expecting a different result."

  Benjamin Franklin, Albert Einstein, Chinese Anonymous

Outpatient Detoxification

- Office/Outpatient drug detox program
- Comprehensive Pain Management Program
- Patient Type:
  - On lower opioid dose, simpler medication plan (1-2 meds), more gradual wean
  - Motivated
  - Low psychosocial issues
  - Community social support for plan

Outpatient Detoxification

- Weaning Process
  - Speed of weaning: dose decrease by 20-25% every 10-14 days
  - Urinary drug screen
  - Medications for withdrawal
  - Follow-up daily if possible or available by phone
  - Cognitive behavioral therapy daily or by phone

Inpatient Detoxification

- Multidisciplinary Inpatient
- Highly supervised Programs
- Patient Type
  - On high doses of opioids over 200 MED
  - Needs more rapid detox
  - Not motivated or resistant to weaning
  - High psychosocial issues; history of psychiatric diagnosis, prior failed detox
  - Triple Diagnosis
  - Poor community social support for plan

Inpatient Detoxification

- Weaning Process
  - Speed of weaning: dose decrease by 20-25% every 3 days
  - Monitoring: Urinary drug screen, pain behaviors, drug use and seeking, functional status
  - Support: Meds for withdrawal (temporary), physical rehabilitation (functional approach), follow-up every day, available by phone daily, proactive check-in, onsite problem resolution; aggressive physical rehabilitation to separate physical from drug issues; multiple modalities to treat withdrawal

Rapid Detoxification

- **Indications:** None
  - Very risky (high death rate) from “coma” detoxification
  - Does not treat root pain problem
  - Severe withdrawals
  - Immediately resumes use of narcotics.

Thank You!!!
Questions? I am all ears!





Dr. Fernando Branco
Medical Director
Midwest Employers Casualty Company
Phone: 636-449-7107
Email: Fbranco@mwecc.com