Pain Management in the Outpatient Setting
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Pain Defined
International Association for the Study of Pain

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

Why Are We Here?
- Universal human experience
- Chronic Pain is on the rise
  - Estimated at 30.7% and 43%\textsuperscript{10,19}
- Social Consequences
  - Depression episodes\textsuperscript{21}, disability\textsuperscript{22}, quality of life\textsuperscript{22}
- Opioid Crisis
  - December 2017 Public Act 246, 247 became law
  - To curb persistent and increasing substance abuse and drug diversion problem
- Financial Consequences
  - $560-636 billion\textsuperscript{23}
  - Greater than heart disease, cancer and diabetes combined\textsuperscript{23}
  - Increased hospitalization, institutionalization and mortality\textsuperscript{10}

Acute Pain
- Physical-self has been hurt or is in danger of being hurt
- Response to a hurt or illness
- Initially protects us
- Designed to stop us from injuring the same way
- Short time to allow body to recover and repair
- Memory of the illness or pain is important in our learning
Chronic Pain

- Physical hurt or illness is partially or fully resolved (healed) but pain still present
- Commonly no longer a visible injury and are out of danger
- No longer a local tissue issue but now more systemic
  - Systems: immune, endocrine, nervous
- Nervous system now interpret pain differently
  - Can cause more pain even when it was not painful before
  - It is designed to learn – plasticity
  - Increased sensitivity

What are we doing about it?

- Pain Medication: Prescribe Opioids
  - Primary Care Physicians (15.3 M)
  - Internal Medicine Physicians (12.8 M)
  - Followed by NP (4.1 M) and PA (3.1 M)
- Ordering Images
  - MRI first vs. PT first
- Physical Therapy
- Injections
- Surgery

WHAT IS THE “OPIOID EPIDEMIC?”

The CDC recognizes the opioid epidemic as the worst drug overdose epidemic in U.S. history

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<td>900% increase in individuals</td>
<td>Consumption of hydrocodone more than doubled</td>
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<td>U.S. 5% of world’s population but 80% of global opioid supply, and 99% of global hydrocodone supply</td>
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INCREASE IN OPIOID PRESCRIPTIONS

An increase in opioid use started to occur in 1996, largely for two reasons:

1. Release of OxyContin (extended releases of oxycodone)
2. American Pain Society began campaigning for “pain as the 5th vital sign” due to the perception that pain was under treated
**Local Communities Sue Big Pharma for Opioid Epidemic**

- Macomb County: 3 communities join dozens of other MI cities and counties vs. opioid manufacturers, distributors and prescribers
- Seeking damages for creating a public health crisis and economic burden
- Stated manufactures used deceptive marketing to promote use of highly addictive pills
- User builds tolerance and wants more when prescriptions run out or are too expensive, so turn to heroin
- Overdose rate is climbing: 380 in 2017
- City costs: police, emergency medical, treatment and jail costs

Detroit Free Press, Georgiaa Kovanis April 25, 2019

**How is Pain Processed: The Nociceptors**

- These are receptors located all over the body that provide the harmful/non harmful stimulus to the nerves
- Consider the picture of the finger touching water:
  - The message is sent that your finger is touching something (in this example, water)

**How is Pain Processed: The Nerves**

- Nerves connect your body and your brain
- Nerves are how messages get transmitted from your body to your brain and vice versa – from your brain to your body
- In the example of the finger touching the water, the nerves transmit that message from the nociceptors to the brain for interception

**The Body’s Alarm System**

- The nerves in the body serve as an electrical alarm system
- Nerves send “danger” messages to the brain when a threat is perceived

Example:
  - Grabbing a hot pan
    - Brain produces pain → remove hand
    - Alarm system ramps down and then shuts off
    - Alarm system is ready for the next danger
But.....

- In 25% of people, the alarm does not shut off
- Takes less activity and movement before the patient experiences pain
- Limited movement and subsequent pain is not due to tissue injury, but because of an extra-sensitive alarm system
- The brain then interprets what would otherwise be normal input as a "threat"

What ramps up the alarm?

- Failed Treatments
- Persistent Pain
- Fear & Anxiety
- Job issues
- Family concerns

The Big Picture

- A sensitive alarm system involves the WHOLE brain
- Brain is pre-occupied and overwhelmed with perceived "threats"
- People in pain may forget things and struggle with focus
- Our job is to do whatever we can to help calm the alarm system down

Pain Experiment

- How can we convince people who are in pain that we understand they are in pain but it is not just about the tissues in the body
- Brain is designed to protect you
Silencing the Alarm

Things we can do to calm the system (Brain) down:

- MRI, CTSCAN, x-rays are highly sensitive images
- 90% of images show ‘changes’
  - Degenerative disc 30%
  - Protrusions 40%
- Explain this is normal
- What are the options?
  - Medication, PT, injections, surgery
- Pain = stop!
  - Movement is good for the body!

Separating Fact from Fiction

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How to Explain Pain to Patients: The Set Up

- Engage patient and develop trusting relationship
- Power of a medical degree or the word ‘doctor’
- Tell stories to relate
- We are in this together
- Stand next to them not opposite
- Sit at their level
Watch Your Words

• “Slipped” disc
• “Dislocated” shoulder
• “Pinched” nerve
• “Broken” back
• “Crumbling”
• Joint “wearing out”
• What other words come to mind?
• Words mess with your brain

How to Explain Pain to Patients: Pathways/Medical

• Nerve tells you something hurt you
• Brain decides what to do with this info
• Goes back to experiences²
  • Good = decrease pain intensity
  • Bad = increase pain intensity
• Have we been here before
• Example: brush a bush or snake bite
• Normally people stop moving due to
  – Fear
  – Worry
  – Avoidance

Pain: Myths and Beliefs

• Back pain → don’t move, lay in bed, rest
• Don’t lift, bend, stoop
  – Lifting and moving is good for the body
• Brace yourself before your move
  – Try clenching your fist
  – Now bend your wrist
  – Fighting yourself
• Use it or lose it, don’t protect it
• Warn out and tired
  – System is more sensitive, easier to compensate
  – Last straw broke the camels back

Pain: Move!

• Movement is good for the body
• It is normal to move
  – Vary how much, far, weight, direction
• Build trust in your body
• Mindset
• Relax, Move, Breathe

I can manage my pain and gain CONTROL
Pain Neuroscience Education (PNE)

- Avoid harmful language (collapsing, herniated, torn)
- Address psychosocial aspect of pain
- Address fear avoidance behaviors
- Graded movement exposure
- Educate that pain is real, but threat perceived by brain is not

Why Physical Therapy

TWO PRIMARY REASONS:

1. Movement
   Pain can impact movement and physical therapist (PT) are movement specialists. A PT can help identify movement limitations and show the client how to regain function

2. Education
   Research continues to support the importance of educating patient on pain in conjunction with PT to increase function, reduce pain intensity and minimize the risk of future injuries

How Do We Change This?

- The Wall Street Journal: Center for Disease Control recommends PT as alternative and is especially effective at reducing pain and improving function in LBP, fibromyalgia, hip and knee CIA
- Physical therapy needs to be FIRST line of defense
- Early PT (<14 days) leads to decreased:
  - Physician visits
  - Advanced imaging
  - Surgery
  - Opioid use
  - Out of pocket, pharmacy and outpatient costs
- Stop pain in the acute phase
- Education is key
Physical Therapy

- Pain can be a teacher
  - Example: sit to stand
  - Pain in back = used back
  - Use glutes instead like an elevator
  - Pain? Sit back down and try it again
- Teach clients how to activate their muscles, individually and as a whole
- Figure out habits
  - Where do they hold tension?
  - Use a trigger to reset
- Mimic their environment, movement, duties
- Consistently ask for feedback
- Manual: release tight tissues, teach how to activate weak muscles, provide resistance, decrease swelling, increase mobility, decrease pain

How should we be treating?

- Current best literature supports the following:
  - Teaching people about pain (Pain/Therapeutic Neuroscience Education)\(^2\)
  - Manual Therapy
  - Listening
  - Exercise
  - Yoga
  - Mindfulness Meditation
  - Compassion and Empathy

Motivational Interviewing

- Effective way of talking with people about change
- Decision to change is often difficult
- How long does it take to make a change
  - Motivation
  - Wanting and also not wanting to change: Pro/Cons
  - Produce anxiety
  - Procrastinate
  - Can be seen as resistance

Motivational Interviewing: as the Provider

- Move forwards as a partner
- Acceptance of their right to make their own decision
- Keep their best interest in mind
- Best ideas come from the client – their idea
- Open questions: open mind
  - How do you feel?
  - What are the advantages you see …
- Affirmations
  - Build self efficacy and confidence
  - Notice their effort, showing up, present
- Reflection/Summary: convey empathy, understanding
  - Review back to them what they said
**Motivational Interviewing: as the Patient**

- Want expectations and goals of the providers and themselves
- Want to be heard
- Help them focus
- Develop a plan WITH them
- Figure out own internal motivation
  - I want, I can, I wish, I will
- What will be the first step
- Put them in charge and support them

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**Motivational Interviewing: Planning**

- SMART Goals
  - Specific
  - Measurable
  - Achievable
  - Relevant
  - Time

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**What we can change**

- Exercise
  - in the morning as cortisol resets
  - boost in the am and drop as the day goes on
- Food
  - Eat vitamin C - regenerate tissue
  - Magnesium – modulate stress
  - Eat food you recognize
  - Nothing processed
  - Prep food day or week ahead
- Meditation – practice daily focus
- Sleep

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**Mindfulness: Meditation Overview**

- When we get it from ourselves we do not need to get it from anyone or any place else
- You are already whole
- Silence is there, just like your heart beat is there and you breathe without thinking about it
- Asian culture: heart and mind are the same
- Only have this moment
- Be who you already are – be OK with that
- Let thoughts come and go without reaction
- Rest in awareness – do not shut anything out
- Be in the knowing – not judging
- Just BE
Mindfulness: Jay Shetty (Monk)

- Goal: Mind ahead of the body
- Friction when body is ahead of the mind
- Focus on breathing
  - In 4 seconds/out 4 seconds “box breathing”
- Visualization
  - Deal with stress before the activity
  - Visualize confidence, eloquence and carry it with you into the future
  - Normally we mentally prepare for things to go wrong and thus go into it with fear
- Sound: be aware
  - Most basic sense we have
  - 1st sense and last sense we have

Mindfulness: Meditation Overview

- They are in charge
- They are in control
- When they fatigue, the mind wonders
- Mindfulness: decrease the pain, get symptoms under control not used to get rid of symptoms, thinks less of pain but more of what is going on in the moment.

Sleep: Institute for Functional Medicine

IFM, Shawn Stevenson (Model Health Show and Podcast. Sleep Smarter), Dr. Greg Wells (Superbodies, The Ripple Effect)

Minimize or Avoid Stimulants

- No caffeine after 2 pm
  - Half life is 6-8 hours
  - Coke, tea, coffee, chocolate, desserts containing coffee
  - Read labels of everything before you eat and drink
- No alcohol 3 hours before bed
  - Takes 1 hour to digest 1 glass of alcohol
- Medication: some meds have stimulating effects
  - ask pharmacist
- Exercise daily — prefer am, but at least 3 hours before bed
Sleep: Institute for Functional Medicine

Nighttime Tension and Anxiety

- Avoid before going to bed
  - Watching the news
  - Reading stimulating, exciting materials
  - Paying the bills
  - Checking financial reports or the stock market
  - Arguments
  - Negative repetitive thoughts about the fact that you cannot sleep

- Do
  - Achieve action plan or resolution of arguments
  - Positive self talk phrases: I can fall asleep. I can relax.
  - Writing in a journal thoughts that are running through your head
  - Schedule time within a few days to deal with whatever is troubling
  - Relaxing yoga or stress reducing DVDs and apps available

Sleep Planning and Preparation

- Plan sleep into your schedule: 8-9 hours in bed
- Go to sleep and wake up at the same time each day
- Prep for bedtime 30 minutes before going to bed
- Finish eating 3 hours before bed
- Take hot salt/soda aromatherapy bath
  - Raising body temp helps induce sleep, relaxes muscles and reduces tension
  - Epson salt (1-2 cups), ½-1 cup baking soda, lavender oil
  - Absorbs in the skin, alkalizing helps stressed out acidic body, lowers cortisol levels
- Avoid before bed
  - Late afternoon, evenings naps or naps longer than 45 min
  - Large meals and spicy foods
  - Drinking more than 4-8 ounces of fluid

Sleep: Institute for Functional Medicine

Light, Noise, Temperature and Environmental Issues

- Defend your last hour before bed
- Sleep cave:
  - Turn down light in bathroom or rooms you are in
  - Decrease light in bedroom, use a dimmer to read
  - Use dark window shades/black out blinds in bedroom
- Consider amber (blue blocking) glasses for 1-3 hours before bed to reduce light exposure
- Use white noise generator or HEPA air filter for gentle noises
- Turn off or remove appliances/clocks that make noise
- Temperature of the room: sleep better in colder temperatures
- Avoid sleeping near electromagnetic fields: head 8 feet away
  - Electrical sockets, clock radios, stereos, cell phone, computer
- Avoid electric blankets: turn on before go to bed, then off when in bed

Supplements and Light Therapy

- Supplements
  - Melatonin
  - 5-HTP
  - Taurine
  - Magnesium
- Decrease nighttime cortisol
  - Ashwaganda, phosphorylated serine, lactium casein decapptide, L-theanine: herbs
- Establish evening herbal tea habit
  - Lemon balm, passion flower
- Red light helps to calm the brain
Sleep: Institute for Functional Medicine

Strategies to Use with Trouble Falling Asleep/Stay Asleep

• Don’t stay in bed more than 20-30 minutes trying to fall asleep
  – Leave the bedroom, go to a relaxing room and read/meditate
• Consider reading a good neutral book under low light
• Tablets/phones: nighttime setting, lowest brightness
• Place dark covering over eyes
• Write down thoughts in journal if they continue to wake you up
• Consider counseling

Auto/Work Comp: Return to Work

• Starts acute and normally a MSK issue
• What do you say and do in their first consultation?
  – Off for more than 6 months they have 50% chance of returning to work ever (even other jobs)
  – More than 12 months less than 5% chance of returning
• Are they able to return to work?
  – Can still work with pain → alter, educate
  – At risk for becoming more disable → intervention
  – Screening questions
  – Confidence, work/life balance, coping skills
• Triage: Quicker they are back, the faster they heal
  – Might not directly relate to pain number, but beliefs
  – More damage, irritating me, worse pain
• Positive effect of being in work outweigh the negative effects
  – How would you feel? Family? Colleagues? Economic?

Auto/Work Comp: Return to Work - What do you do?

• Be inquisitive
• Be nosy
• What do you do?
• Mobile work force?
  – Change stations, what can they alter?
• What do you struggle with?
• Why do you think that might be?
• Can you show me how you do it?
• How else do you think you can do it?
• Revisit it each session
• Do you agree with their beliefs? Did you verbalize it?
• Functional Driven Model
• Going to build your bodies capacity as a whole
• Looking for feedback and input as we are a team

Auto/Work Comp: Return to Work - Interventions

• Increase in activity: talk about work like talk about exercise
• Increase in symptoms doesn’t equal increase in injury
• Talk to the employee and the employer: educate both
• Did the employee actually talk to the employer to find something alternative, or is it “I think they would not allow”
• Address Fear Avoidance
• Rarely tell to stop but more likely to alter and modify
• Misconception: RIGHT way to move, sit, lift
  – Matters more that we move
  – Not good to stay in 1 place for too long
  – No set right position, some are better, all can adjust, how do they feel with it: all PERSONAL
  – Posture is dynamic, not static
• Varieties of strategies, offer alternatives, options
Auto/Work Comp: Return to Work - Lifting

- Use all of your body
- Use body to distribute forces
- THEIR most effective way
  - Knee issues, several ways to approach to decrease 1 way of moving and loading the same joints
- Gradual train movement, maybe not change movement
- Use same position to do their job: Choices
  - Kneel on 2 knees
  - Kneel forward
  - ½ kneeling: switch sides
- Can you have someone take a picture of what are you doing? Desk?
- Typically waiting on a health care professional to tell them they are safe or what to do and not do

Summary

- Acute pain can become chronic pain
- How is pain processed
- Options other than opioids
- Alarm clock
- Break the pain cycle
- Separate fact from fiction
- Habits/routes
- Movement is important
- Be in it together
- They want to understand
- They want control

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