MJHS INSTITUTE FOR INNOVATION IN PALLIATIVE CARE

Case Conference: Behavioral Approaches in Pain Management

Moderated by:

Lisa Rosenzweig, PhD
Bereavement Specialist, MJHS Hospice & Palliative Care
Clinical Supervisor & Adjunct Assistant Professor of Counseling Psychology, Teachers College, Columbia University
Private Practice Psychologist

Russell K. Portenoy, MD
Executive Director, MJHS Institute for Innovation in Palliative Care
Chief Medical Officer, MJHS Hospice and Palliative Care
Professor of Neurology and Family and Social Medicine, Albert Einstein College of Medicine

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- A 52-year-old woman returns to primary care clinic for a regularly scheduled visit
- A quick review of her chart prior to the visit reveals that she has been seen every 4 months for 4 years

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- The patient's diagnoses includes:
  - Hypertension
  - Non-insulin-dependent diabetes
  - Hyperlipidemia
  - Obesity
  - Sleep apnea syndrome
  - Chronic back pain

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- Medications include:
  - HCTZ 25 mg daily
  - Ramipril 10 mg daily
  - Metformin 1000 mg daily
  - Simvastatin 40 mg daily
  - Melatonin (OTC) 3 mg at night
  - Naproxen 220 mg twice daily
  - Hydrocodone 5 mg/acetaminophen 325 mg 1-2 tablets three times per day PRN

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- Notes from the last three visits state
  - The patient's medical conditions have been stable and generally well-controlled
    - Blood pressure:135-150/78-90
    - Last HbA1c: 6.8%
    - Total cholesterol 220 mg/dl; HDL 50 mg/dl; LDL 155 mg/dl; triglycerides 150 mg/dl
    - CBC and tests of renal and hepatic function have been normal

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- Notes from the last three visits also indicate that
  - Weight has been stable at 92.9 kg (BMI 35.2)
    - Weight loss has been recommended but the patient reports an inability to diet effectively
  - Sleep apnea syndrome has been diagnosed from observations of her husband and history of snoring
    - Notes also document that evaluation at the sleep clinic has been offered but declined

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- Finally, notes from the last three visits reveal that
  - The patient's major complaint at each visit has been back pain, which she has described as
    - *'getting worse'* and *'stopping me from doing things'*

Background to the Case

- History of the back pain:
  - Lumbar pain began insidiously about 6 years ago
  - Initially occurring only after prolonged periods of sitting or after lifting heavy objects, it gradually worsened and became more frequent
  - During the past 2-3 years, the characteristics of the pain have been relatively stable, but the intensity and the impact on the patient's life, has gradually worsened

Background to the Case

- History of the back pain:
  - The most intense pain is mid-lumbar, with frequent radiation to the buttocks and iliac crests bilaterally, right worse than left
  - The patient awakens with mild to moderate back pain, which is continuous throughout the day, unless she is sitting in a recliner
  - She can be pain-free in the recliner, but lumbar pain can start with sudden movements
  - With walking, sitting in a regular chair, or prolonged standing, the pain worsens and radiating pain is experienced
    - After prolonged sitting, pain also is referred to the posterior thighs, again right worse than left

Background to the Case

- History of the back pain
  - Pain usually is worse in the evening than morning but the patient is able to get to sleep with melatonin
  - She awakens several times during the night and usually is experiencing pain when this occurs
    - If she is unable to go back to sleep, she moves to the recliner and is able to sleep again as the pain declines
  - The quality of the lumbar pain and the radiating pain is deep aching and there is diffuse mild tenderness in the lumbar region

Background to the Case

- The physical findings associated with the pain:
  - Lumbar tenderness and pain-limited spinal range-of-motion, with most severe pain with lumbar extension
  - No pain on straight leg raising or on hip movement
  - The only finding on neurological examination has been an antalgic gait
    - The neurological examination has not demonstrated any abnormalities of strength, sensation, coordination or balance, or deep tendon reflexes

Background to the Case

- History of the back pain:
  - The back pain was evaluated by MRI imaging 2 years ago
    - The findings include L5-S1 grade 2 spondylolisthesis, degenerative facet arthropathy from L1 to S1, degenerative disk disease at every level from L1-L2 to L5-S1, and mild lumbar scoliosis
  - The patient was referred to an orthopedist, who diagnosed back pain due to spondylolisthesis and degenerative changes
    - The orthopedist indicated that surgery might be considered at some point in the future but the indications for a large procedure involving multi-level fusion did not now exist
    - The orthopedist recommended weight loss, physical therapy, and evaluation by the pain clinic

Background to the Case

- With worsening of the pain, the PCP tried an array of treatments prior to this year
  - A weight loss diet was recommended and the patient had one visit with a dietitian, and although weight has stabilized for the past 2 years, weight loss has not occurred
  - Trials of NSAIDs other than naproxen were not tolerated due to GI distress
  - Neither gabapentin nor amitriptyline was analgesic and both produced mental clouding
  - Acupuncture was not effective
  - On two occasions—3 years ago and 18 months ago—the patient participated in twice weekly physical therapy for 6 week periods, but progress was limited by therapy-associated back pain and the patient did not perform home exercises as directed

Background to the Case

- After the MRI and orthopedic evaluation, and with pain worsening despite conservative treatment, the patient was referred to the Pain Clinic
  - The physician concurred with the diagnosis and recommended a series of injection therapies
    - Over the course of six visits, the patient underwent an epidural steroid injection, bilateral sacroiliac joint injections, and bilateral facet joint injections — followed by medial branch nerve blocks
    - Because the interventions focused on the facets provided some relief, the patient underwent radiofrequency facet denervation at two levels bilaterally
      - She reported no relief from this procedure

Background to the Case

- The impact of the pain during the past year has been substantial
  - The patient had been working for a large department store and was allowed to change from full-time to 12 hrs/week per diem after an increase in absences
  - She has become increasingly sedentary and has been relying more on her children and husband to do household chores
  - Her sleep has become more interrupted than in the past, and she experiences more daytime fatigue
  - She describes her mood as ‘frustrated’; she is sometimes sad and her quality of life is ‘not good’, but she can still enjoy time with her family and denies that she has been depressed

Additional Background to the Case

- Social history:
  - Married for 25 years and has 3 children, ages 30, 28, and 21 years
  - Husband works as an auto mechanic
  - Reports that her marriage is strong and her family is very supportive
  - The patient has health insurance through her husband's work
  - The patient is Protestant but has not been active in the Church for many years
  - No history of smoking or drug abuse

Additional Background to the Case

- Family history:
  - Mother is alive, 75 years old, and has coronary artery disease and congestive heart failure
  - Father died at age 80 from congestive heart failure
  - One brother, 48 years old, who is healthy

Back to the Visit

- The patient starts the current visit by stating that she is in pain and needs something to help her feel more comfortable and function better
- For the first time, she expresses concerns that the pain will continue to increase and completely disable her
- She requests more of the opioid pain medication

Back to the Visit

- The PCP 's assessment of her current therapy includes:
  - The naproxen is well tolerated and provides some consistent analgesia—"I sleep better when I take it"
  - She reports taking the hydrocodone 5 mg/acetaminophen 325 mg as instructed—2 tablets 3 times per day
    - Each dose takes an hour to start working and reduces the pain for a period of about 2 hours
    - She denies side effects from the opioid, but also says that she often naps during the day after taking a dose, "because I don't sleep well at night"
    - She also notes that the analgesia provided by the opioid does not usually allow her to do more activities
    - There is no indication of aberrant drug-related behavior

Back to the Visit

- The PCP conveys an understanding of the patient's situation
  - The pain is worsening and there is no cure; are only treatments that could focus on reducing pain and improving the ability to function and experience a good quality of life
  - The patient has been through many unsuccessful therapies, both non-invasive and invasive, and nothing has worked well
  - The only treatments that have provided any help are the medications and it is understandable that a person would want higher doses of an analgesic drug that has been helpful

Back to the Visit

- The PCP tells the patient that it may be necessary to adjust her medications, but this would not be the safest approach now, particularly when sleep apnea is untreated, nor is it an approach that would directly deal with how poorly she is functioning
  - The PCP asks whether the patient would be open to another trial of physical therapy followed by home exercises, and another attempt at losing weight; the PCP also raises possible referral to the sleep clinic again
  - The patient states that she did not expect to be offered treatments that had not worked before

Back to the Visit

- Summary:
  - The patient is a 52-year-old woman with refractory chronic lower back pain and a high level of disability, whose management is complicated by untreated sleep apnea, deconditioning, and lack of activity, obesity, and increasing expressions of fear related to the pain
  - There are no other urgent medical issues
  - The PCP decides to make no changes in medication and to initiate a more focused behavioral approach intended to address both pain and disability

Rationale for Behavioral Pain Approaches

- Pain is a chronic illness
  - Goal is to manage symptoms, avoid further complications, and improve quality of life
- Chronic illness management is optimized by the combined use of:
  - Appropriate medical interventions
  - Self-management strategies such as adopting/changing behaviors, exercise, nutrition, stress management
- Clinicians are key in promoting self-management

Cheatle, Med. Clin. North Am, 2016;100(1):365-371

Rationale for Behavioral Pain Approaches

- Therapies are evidence-based:
  - Behavioral therapy
  - Graded exercise program
  - Appropriate medication management
- These therapies may improve:
  - Pain and distress
  - Activity

Loeser et al., Semin Neurosurg, 2004;15(1):13-29; McCracken et al., Spine, 2002;27(22):2564-2573; Cheatle et al., Curr Psychiatry Rep, 2006;5:371-376; Cheatle, Med. Clin. North Am, 2016;100(1):365-371

Rationale for Behavioral Pain Approaches

- Other benefits:
  - Directly diminish pain
  - Reduce distress (anxiety, fear, worry, sadness)
  - Diminish disability
  - Reduce negative thinking

McCracken et al., Spine, 2002;27(22):2564-2573; Cheatle et al., 2017; Oxford University Press

Behavioral Pain Approaches For Primary Care

- Motivational Enhancement Therapy
- Diaphragmatic Breathing
- Positive Self-Talk

Back to the Visit

- The PCP acknowledges the patient's reluctance and indicates that the best approach at this time would involve specific techniques to mobilize her and condition her muscles, as well as strategies that she could do herself to reduce pain and distress
- The PCP asks the patient to respond to a brief assessment

Assessment Results

Values

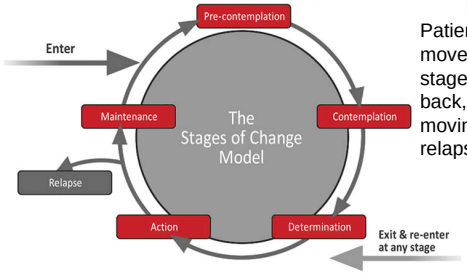
- [x] Good parent
- [x] Good spouse/partner
- [ ] Competent/skilled
- [ ] Healthy
- [ ] Attractive
- [ ] Energetic
- [ ] Responsible
- [ ] Youthful
- [ ] Athletic
- [ ] Spiritual
- [ ] Considerate
- [ ] Disciplined
- [ ] Respected at work
- [ ] Efficient
- [x] Independent
- [x] Good role model
- [ ] In control
- [ ] Strong
- [ ] Popular
- [ ] Faithful
- [ ] Other_____

Readiness-for-Change

PRECONTEMPLATION	*"The best thing I can do is to find a doctor who can figure out how to get rid of my pain once and for all."*
CONTEMPLATION	*"I am beginning to wonder if I need to get some help to develop skills for dealing with my pain".*
ACTION OR MAINTENANCE	*"I am using some strategies that help me better deal with my pain problem on a daily basis (exercise, physical therapy, relaxed breathing, positive self-talk, etc.)"*

Goal: Motivate patient to restart home exercise and consider resuming PT

Stages of Change



Patients may move into any stage and then back, including moving from relapse to action

http://johnnyholland.org/?attachment_id=9899, 2011; Adapted from Prochaska et al., Changing for Good, 1994; William Morrow and Company

Back to the Visit

- The PCP encourages the patient to spend the rest of this visit discussing a plan and set 4 more appointments at 1- to 2-week intervals so that they can together work on an approach that will focus on function and quality of life, as well as pain
- The patient indicates that she understands and would give anything a try

Motivational Enhancement Therapy (MET)

- MET is an evidence-based, patient-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence
- Also known as 'Motivational Interviewing' (MI)

Adapted with permission. Bombardier, Australian Psychological Society, 2010; Alperstein et al., J Pain, 2016; 17(4):393-403

Efficacy of MET

- RCTs in substance abuse treatment:
  - Less alcohol use (N=9); OR 2.31; 22% improved
  - Less dangerous drinking (N=4); OR 1.83; 16% improved
  - Smoking abstinence (N=8); OR 1.34; 8% improved
  - Less smoking (N=4); OR 1.18; 4% improved
  - Less marijuana use (N=5); OR 3.22; 30% improved
- Other RCTs using patient-reported outcomes:
  - Quality of life (N=6); OR 2.21; 24% improved

Lundahl et al., Patient Educ Couns, 2013; 93(2):157-68

Efficacy of MET

- RCTs evaluating prognostic markers
  - Lower blood pressure (N=1); OR 1.65; 14% improved
  - Lower HIV viral load (N=3); OR 2.15; 20% improved
- RCTs evaluating self-monitoring (N=4); OR 2.14; 22% improved
  - Less sedentary behavior (N=5); OR 1.47; 10% improved

Lundahl et al., Patient Educ Couns, 2013; 93(2):157-68

Efficacy of MET

- Meta-analysis shows significant MET effect
  - Across many outcomes: body weight, alcohol and tobacco use, sedentary behavior, and adherence to medical advice
  - Across varied settings and patient characteristics
  - When delivered in brief consultations

Lundahl et al., Patient Educ Couns, 2013; 93(2):157-68

Assumptions of MET

- People generally resist being coerced (reactivity)
- Acknowledging the freedom *not* to change can make the change possible
- The focus is always on what the patient is ready, willing, and able to do during today's visit
- No patient is completely unmotivated and motivation is shaped within the context of the patient-doctor *relationship*

Adapted with permission, Schneiderhan et al., Society of Teachers of Family Medicine, 2014; Bombardier, Australian Psychological Society, 2010; Miller et al., 2012; The Guildford Press

MET: Key Strategies

Provider uses OARS…

- **O**pen-ended Questions
- **A**ffirmations
- **R**eflective Listening
- **S**ummarizing

To get the patient to talk about DARN…

- **D**esire to Change
- **A**bility to Change
- **R**easons to Change
- **N**eed to Change

Principles: Express Empathy, Develop Discrepancy, Roll with Resistance

Miller et al., Motivational Interviewing in Health Care, 2008; The Guildford Press

MET: Key Strategies

- The mnemonic RULE describes several key elements of MET
  - ***R***esist the righting reflex: we want to *fix*…
  - ***U***nderstand patients' motivations: it is their reasons for change, not *ours*…
  - ***L****isten* to the patient
  - ***E****mpower* the patient: better outcomes when patient participates

Miller et al., Motivational Interviewing in Health Care, 2008; The Guildford Press

MET: 5-Step Practical Approach

- ***Step 1***: Identify the target behavior
- ***Step 2***: Assess readiness-to-change and values; goal is to move patient to the next stage
- ***Step 3***: Assess the good and 'not-so-good' things about change; listen; show empathy; summarize
- ***Step 4***: Set SMART goal(s): Specific, Measurable, Attainable, Realistic, and Timed
- ***Step 5***: Elicit potential barriers and address them; assess confidence for goal attainment; adjust goal as necessary

Adapted with permission, Schneiderhan et al., Society of Teachers of Family Medicine, 2014

Back to the Visit

- The PCP initiated the following (**OARS**)
  - Open-ended questions about the prior attempts at PT and exercise
  - Affirmations about the patient's strengths, her diligence as a partner in helping her doctors find an approach that works for her
    - Focuses on what has been accomplished, not what's left undone
    - Reframes failure as a partial success
  - Reflective comments
    - Mirrors back to the patient positive or negative behaviors that she may not have previously seen
  - Summarizing comments

Back to the Visit

- The PCP then elicited change statements (**DARN**)
  - **D**esire to change
    - Focus on not disappointing her family
  - **A**bility to change
    - Focuses on what conditioning and mobilization can do in terms of functioning
  - **R**easons for change
    - Benefits of changing compared to the burdens, with a focus on the better safety and better overall effect of conditioning and mobilization, compared to other approaches, and also the safety
  - **N**eed to change
    - Focus on the risks of not changing

Back to the Visit

- By the end of the visit, the PCP had used this discussion to define 3 goals and one emerging plan
  - Goals
    - Conditioning and mobilization through a return to PT (with a collaboration that defined smaller tasks and objectives)
    - Return to primary care clinic for a series of visits to track progress in physical therapy and learn 2 types of mind-body therapy
    - To engage with the family within the next month on two additional steps:
      - Diet
      - Sleep study and treatment

At A Later Visit

- The PCP later followed through with a brief training in two mind-body therapies:
  - Diaphragmatic Breathing
  - Positive Self-Talk

Diaphragmatic Breathing

- Can assist in the management of pain and distress
- The mnemonic RIDE describes key elements
  - ***R****ationale* – Briefly explain the reason why you are showing the patient DB
  - ***I****nstructions* – Tell the patient what he or she is about to do
  - ***D****o* the DB exercise together with the patient
  - ***E****licit* the experience and identify potential barriers

Vlayen et al., Pain, 2000;85(3):317-332; McCracken et al., Pain Res Manag, 2002;7(1):45-50; Asmundson, Pain Res Manag, 2002;7(1):7-8; Jafari et al., Pain., 2017;158(6):995-1006

Positive Self-Talk

- Patient selects positive statements that conflict with, help coping with, or substitute for negative thoughts
- The statements are written and the patient recites the statements whenever there is an awareness of a negative thought that drives catastrophic thinking

Wideman et al., Pain Manage, 2011;1(3):249-256

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- Conclusion:
  - Chronic pain is an illness characterized by a treatment-refractory symptom associated with adverse psychological, behavioral, and psychosocial consequences
  - Behavioral approaches are an evidence-based set of interventions that can address both pain and disability
  - Selected behavioral approaches can be implemented effectively in the primary care setting, including Motivational Enhancement Therapy, Diaphragmatic Breathing, and Positive Self-Talk

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Q&A