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PSYCHOLOGICAL PERSPECTIVES OF OPIOID USE AND COGNITIVE BEHAVIOR TREATMENT

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Psychological Perspectives of Opioid Use and Cognitive Behavior Treatment

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OBJECTIVES

1. Explain multidimensional aspects of chronic pain
2. Discuss problems with opioid therapy
3. Discuss physician options for assessing and treating contributing/problematic factors in opioid therapy
4. Evaluate the value of Cognitive/Behavior therapy in treating chronic pain
5. Explain treatment components of Cognitive/Behavior Therapy

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48 million people in US

Little relief from current medications

Medications have potential for harmful side effects

Depression 4% to 66%

Estimated cost Chronic pain $215 Billion Depression $80 Billion

Co-occurrence associated with more disability and poorer prognosis

Greenberg and Birnbaum, 2003

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BIOPSYCHOSOCIAL MODEL

Most comprehensive

HOW PAIN IS ASSESSED?

1. Unique
2. Individualized
3. Complex interaction of biological, psychological, social factors

Allows for interdisciplinary treatment

Medicine, PT, Psych, Behavioral health

Gatchel 2004, Turk and Rudy 1987 Wright and Gatchel 2002

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BIOPSYCHOSOCIAL MODEL

Cognitive-Behavior Therapy is treatment that addresses all aspects of Bio-Psychosocial Model

Standard of care for patients with chronic pain

Better than wait list control group or medical management

Significant changes seen

1. patient's pain experience
2. Improved cognition and coping
3. Improved activity level
4. Behaviors around pain issues are better
5. Improved social role functioning

DISADVANTAGES

Regarded as last resort

All other medical interventions undertaken and failed

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NAVIGATING THE HEALTH CARE SYSTEM

1. Misuse/overuse of opioids
2. Deconditioning
3. Obesity
4. Sleep disturbance
5. Poor body mechanics and posture
6. Lack of social support, communication, social stress
7. Unhelpful coping strategies
   a. Catastrophising
   b. Fear/avoidance
   c. Overgeneralization
8. Depression and anxiety

These problems can actually increase pain by contributing to tissue damage and increasing psychosocial problems

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Case Example— Sarah 31 year old English Professor

Likes gardening, dancing, horseback riding

–acute onset of pain while gardening
–conservative treatment – rest, stop exercises (deconditioning)
–CT Scan – herniated disc (source of nociception)
–NSAID, mild opioid (medication)
–Neurosurgeon recommended surgery
–Opted for PT and medication
–Nightmares about wheelchair confinement (sleep deprivation)
–Frightened about surgery (autonomic arousal)
–Had to stop work (short term disability)
–SURGERY able to function on increased medication
–Gradual return to work, gardening, dancing, horseback riding
–Still on medication

TWO MONTHS LATER

–Sharp pain increase (Started in leg after hiking)
–Middle of night awakening (sleep deprivation)
–Back spasms (source of nociception)
–Consult surgeon "Nothing abnormal on MRI" (anxiety)
Non-operable. Recommends full activity
–"I am in pain, why can't they find something?" (negative thoughts)
"Am I making this up? Is it all in my head?"

Sarah unable to do housework or pleasant activities

–Resting when not at work (deconditioning)
–Impatient with students and friends (irritable)
–Constantly talks to friends about pain (decreased social support)
–Feels exhausted, alone, defective, miserable, unlovable
–Feels out of control of body (helpless, depressed)

Second Neurosurgical Opinion

–Myelogram (no disc herniation)
–Recommends stabilization with spinal fusion
–Sarah is desperate but agrees to surgery

–no change in pain, unable to work (medication increased, disability)

–Disability insurance representative hassles her about paperwork
–MD has not filled in paperwork (stressed, panic)

Sarah's Family Doctor tells her "Live with pain"

Referred to Psychologist "It's all in my head" (desperate, anxious)

Caudill, 1995

OPIOID MEDICATIONS

**Growing use with increasing controversy

**Side effects
1. hyperalgesia
2. hypogonadism
3. sexual dysfunction

Despite possible benefits 2.8% to 62.2 % of patients may exhibit problematic use

CHRONIC USEAGE
1. tolerance
2. dependence
3. potential for misuse or addiction

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" PROBLEMS IN OPIOID MANAGEMENT"

—Many MDs prescribing opioids have little training in addiction or aberrant drug related behavior

—Recent trend in Pain Management Physicians and Centers is preference for injections or intervention only

—Risks in writing prescriptions DHEC scrutiny of MD behaviors and license jeopardy

—Poor insurance/Medicare reimbursement for "med check" visits

Turk, Swanson, Tunks 2008

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****** TOLERANCE*******

Physiologic changes result in increased need to accomplish same level of pain relief
Can also cause side effects such as sedation, nausea, respiratory depression
Occurrence is variable and does not of itself imply addiction

******DEPENDENCE ******

Syndrome of unpleasant physical symptoms which can occur if medication abruptly stopped
It is an expected occurrence in the presence of continued opioid use

—nausea —vomiting —sweating

Possible emotional dependence and cognitive side effects
– fear of pain —fear lack of control

If abruptly stopped , may lead to
– depression —insomnia

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****** ABUSE *****

—primary, neurobiological disease
opioids cause changes in limbic system's mediation by dopamine

—Development influenced by genetic, psychosocial, environmental factors

—Characterized by craving, impaired control, compulsive use, continued use despite harm

—Can lead to harmful behavior with physical, social , and legal consequences

Jamison, Butler, Budman, 2010

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APPROACHES TO MANAGEMENT

–Optimal use of opioids must include evaluation of risks associated with potential abuse

–Opioid misuse may indicate treatment adherence issues or more serious behavioral problems

Screening Devices to determine risk potential

1. Screener and Opioid Assessment for Pain Patients (SOAPR-R)
   24 item self-administered screening instrument (Butler, Buchner, et al 2004)
2. Prescription Drug Use Questionnaire (PDUQ)
   Structured 20 minute interview with patient (Savage 2002)
3. Prescription Opioid Therapy Questionnaire (POTQ)
   13 item questionnaire completed by physician (Michna, Ross, et al 2004)
4. Screening for Addiction in Patients/ Problematic substance abuse
   (yes/no) questionnaire with cut off values (Compton, Darakjian, and Miotto 1998)

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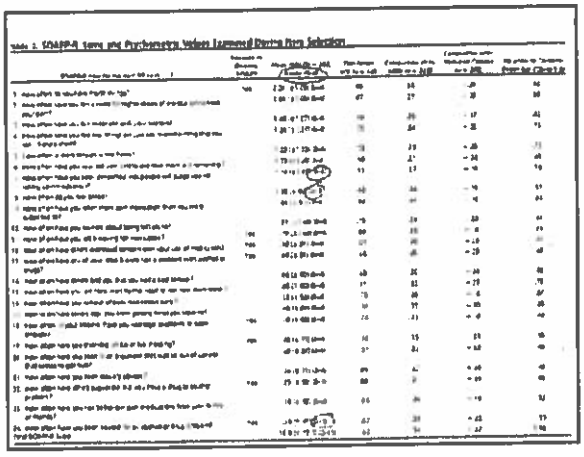

Appendix I

Prescription Drug Use Questionnaire[?]

Yes No

Evaluation of the Pain Condition

[illegible]

Opioid Use Patterns

[illegible]

[illegible]

Social/Family Factors

[illegible]

Family History

[illegible]

Patient History of Substance Abuse

[illegible]

Psychiatric History

[illegible]

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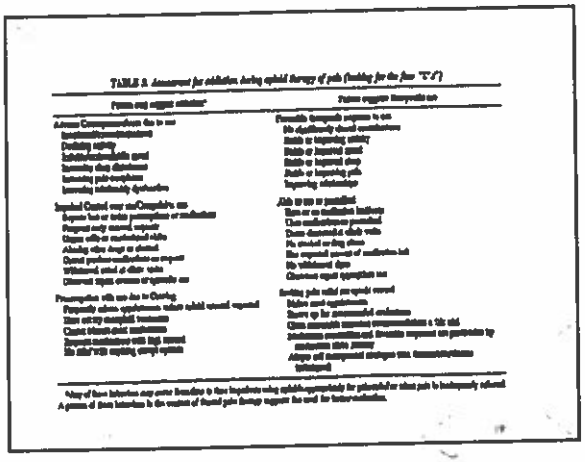

MANAGEMENT

–Regular urine toxicology screen
determine compliance, presence of illicit substances

–Risk Factors for Aberrant Prescription Use —— 3 clusters of variables

History of substance abuse

History of legal problems

History of psychiatric problems

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MODIFIED TREATMENT APPROACH

One or more risk factors indicate need for modified treatment

————Narcotic Agreement to include————

1. Psychological evaluation and treatment
2. Closer monitoring of behaviors including monthly urine screen and pill counts
3. Education by psychologist concerning avoiding opioids as a way to deal with anxiety, stress, or sleep disorder
4. Stress importance of compliance with "narcotic contract"
   how to keep opioids secure
   compliance with behavioral and cognitive regimens to control pain
   improve coping and functioning
   –exercise –relaxation –psychotherapy

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COGNITIVE BEHAVIOR THERAPY

Why is it necessary?

1. People in chronic pain are more depressed than the general population
2. Pain interferes with mood when it interrupts important life domains
   work, recreation, social relations
3. Intrapersonal resources are important in coping with pain
4. Self esteem fosters control and mastery
   buffers against chronic stressors (Turk, Okifuji, Scharff 1995)
5. Better self esteem is linked to better adjustment, lower depression, and less helplessness
   in people with a variety of health problems (Tait 1999)
6. Better self esteem in pain patients associated with less pain
   less interference of pain in activity
   better mood
7. Should patients interpret pain catastrophically, they develop
   pain related fear/activity avoidance
   physical disuse and long-term disability (Leeuw, Grooseus et al. 2007)

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COGNITIVE BEHAVIOR THERAPY (CBT)

–Psychotherapeutic approach that addresses
  Dysfunctional emotions –depression, anxiety, anger
  Maladaptive behavioral patterns
  Maladaptive cognition/thinking

–Uses goal oriented, systematic procedures
  to return patients to work, full functioning in life

–CBT is effective in a variety of conditions
  Mood, anxiety, chronic pain
  Personality disorders
  Fibromyalgia
  Substance use disorders

AUTHORS AND DEVELOPERS
- Edward Thorndike
- B.F. Skinner
- Cognitive Therapy of Aaron Beck
- Rational Emotional Therapy of Albert Ellis

CBT and Health Care
  Treatment programs for specific disorders have been evaluated for efficacy
  The health care trend of Evidence Based Medicine has favored CBT over psychodynamic approaches where specific treatments for symptom based diagnoses are recommended

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MALADAPTIVE BEHAVIOR PATTERNS

Strategies for change using different interventions

1. Self-instructional
2. Demonstration
3. Goal setting
4. Desensitization
5. Training in alternative positive strategies (i.e. relaxation)

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BEHAVIORAL PROBLEMS IN MANAGEMENT

DECONDITIONING

- Even after extensive workup, 85% of cases lack established cause for musculoskeletal pain (Hicks, et al 2002)
- Pain at multiple sites leads to increased likelihood of chronic pain (Croft, et al 2006)
- Pain at multiple sites associated in linear fashion with poor physical condition, impairment, psychological problems, poor sleep quality (Kalmaleri et al, 2008)
- Leads to increased risk of long term work disability and treatment and disability costs

Deconditioning Solutions
- Alternate behaviors
- Daily stretching exercises
- At least 3 times weekly strengthening and aerobic exercising on land or using aqua therapy
- Activity pacing
  - Concept of "uptime" and "downtime"
  - "threshold vs tolerance"
  - Alternate behaviors – sit, stand, walk, recline

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OBESITY

Greater body mass index (BMI) associated with greater number of pain complaints

- Increased number of pain sites
- Tender point sensitivity
- Poorer quality of life
- Reduced physical functioning in patients with chronic pain (fibromyalgia) (Yunus, Arslan, Aldag 2002)

WEIGHT LOSS PROGRAMS

- Weight Watchers
- Paleo diet
- Medical supervision of liquid diet
- Bariatric Surgery

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SLEEP DISTURBANCE

–chronic pain patients show decrease in REM sleep associated with

- Impairment of attention control
- Impairment of working memory
- Impairment of mental flexibility
- Impairment of problem solving

–disturbed sleep architecture contributes to

- Increased sensitivity at pain sites
- Increased sensitivity at tender points
- Increased fatigue
- Increased depression
- Increased stress

SOLUTIONS

- Sedating Anti-Depressant Medication
- Evaluation of sleep postures (pillows, mattress, postural alignment)
- Relaxation, Guided Imagery, Self-hypnosis

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POOR BODY MECHANICS AND POSTURE

-Antalgic Gait
  Shoulder up with cane
  Weight shifted one leg
  Shortened steps

-Guarding
  Shift weight to avoid painful area (sit or stand)

-Bracing
  Muscle tension in response to pain or in anticipation of pain

INSURING CORRECT SPINAL ALIGNMENT IS VERY IMPORTANT

STAND — weight balanced on both feet
  ear over shoulder over hip
  load balanced on spine, pelvic tilt (flexion vs extension)

SITTING —90 degree angles at waist, at knee
  use footstool, lumbar support, cervical support

LIFTING — leg broad base, lift with knees, head up and spine straight
  Golfer's lift

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PREMISE OF MAINSTREAM CBT————————Change dysfunctional thinking

Dysfunctional thinking (influences person's mood, behavior, physiologic functioning)
  Leads to change in affect or behavior (remember Sarah?)

Patients develop automatic/habitual thoughts—"I can't accomplish anything!"
  Can lead to reaction of feeling sad (emotion) or retreating to your bed (behavior
If this process occurs repeatedly, it can lead to physical deconditioning and distorted sleep pattern. (Judith Beck, 2008)

The GOAL: 1. Recognize "errors" or negative thought patterns
  2. Replace these patterns with realistic more effective thoughts
  3. Decrease emotional distress and self-defeating behavior

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Life is Painful,
Suffering is Optional.

Sylvia Boorstein

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Common Negative Thought Patters Seen in Chronic Pain Patients

1. Catastrophising – Fortune Telling – one predicts worse outcome
   Learn to look at realistic odds, and ask what else can happen?

2. Overgeneralization – take one negative experience and generalize.
   One bad situation predicts similar bad experience in a similar situation
   Look for evidence for or against your conclusion, then alter you conclusion

3. Mindreading – you assume from small piece of information what someone's thoughts/motivations are
   Check it out and require evidence for your conclusion

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NEGATIVE THOUGHT PATTERNS — "SELF TALK"

Patterns are automatic, occur quickly, like incomplete sentences

Example: Wake up, first attempt to get out of bed. The pain is still there.
"I can't stand it anymore!" "No one cares!" "I am useless/ worthless"

Result: worry, sadness, depression

This is negative "self talk" – inaccurate, irrational, exaggerated, catastrophic, all or nothing

SOLUTION: Challenge exaggerated statements –

there are things you can do even with pain

You don't have to let your day be miserable

What does that have to do with people caring for you?

Caudill 2002

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REFRAMING TECHNIQUE

State the problem: " I am awakening in pain."

State why it is a problem: " I had planned to visit a friend today."

IDENTIFY:

What can I do? I will see how I feel after taking a shower, stretching, practicing my relaxation, using ice and TENS unit

What do you need? I could ask my friend to come here, or we could meet somewhere close, or we could visit at another time.

Realistic self calming – Pain flare-ups do happen
Flare-ups are usually self-limited
I know what I can do to take care of myself

How do you feel? Sad but hopeful; in control

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PROGRESSIVE MUSCLE RELAXATION

1. Comfortable position either seated or reclining
2. Eyes closed, internal gaze
3. Flex-relax slowly through muscles of body
   feet, legs, hips, abdomen, hands, shoulders,
   neck (3 directions), forehead, around eyes, jaws
4. Abdominal breathing
5. "strong" "calm"
6. Pleasant place – seated comfortably , warmth of sun on chest and arms, beach, meadows, mountains with stream, "Special Place" that only patient knows about

Suggestion For mastery: Breathe "strong-calm"

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GUIDED IMAGERY

Comfortable position – eyes closed

5 deep breaths
Shape – pain is what shape?
Color – pain is what color?
Texture - pain is what texture?
Shape, Color, Texture grow as large as it can – finger signal
Shape, Color, Texture gets smaller and smaller – finger signal

Repeat process 2 more times

Shape, Color, Texture – smaller – See it roll down one leg all the way to toe, then kick it into the far distance.

3 more deep breaths
Open eyes

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****** SELF-HYPNOSIS ******

State of "inner absorption", concentration, focused attention

Allows concentration and focus therefore using more potential

Act of self-control

Differing views on how it works

1. "hypnotizability" as a trait
2. Strong cognitive / interpersonal component – response to suggestion
3. Dissociation – people with early trauma, personality disorder
   hypnosis can be an abusive tool with them
   Fairgrounds

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USES FOR CLINICAL HYPNOSIS

1. Imaginative, mental imagery – Powerful in focused state
   Mind is capable of using imagery (often symbolic) to bring out capabilities, person is imagining (sports, achieved goals)
2. Unconscious exploration to better understand or identify whether past events or trauma are associated with exacerbation or contributing to present emotional state or problems
   Avoids critical conscious thought
   Allows personal intention for change to take effect
   Trauma associated memories are not admissible as evidence in court
3. Medical hypnosis can be used to assist with –
   pain control/ pain associated with severe burns
   gastrointestinal disorders (ulcer/irritable bowel syndrome)
   headaches
   hypertension
   Medical Procedures –surgery, child birth, dentistry

Brain imaging studies using functional MRI and PET scans demonstrate a number of brain structures associated in pain perception (e.g. somatosensory cortex, anterior cingulate cortex, insula) are demonstrably changed through hypnotic suggestion.

(Stroelb, Mollen, Jensen, et al 2008)

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SELF-HYPNOSIS PROCESS

Teaches person to put themselves in a trance

Induction – eye fixation, eye roll, arm levitation, arm catalepsy, relaxation

Deepening – walk down stairs, ride escalator, float on cloud, counting

Pain control Techniques
–Anesthesia – cold/numbness (painful leg in cool stream or lake, glove anesthesia)
–Dissociation – putting self in another time and place
Vivid daydream – floating on a cloud or in a boat
–Altered Sensation/ transformation – cover area of pain with thick layers of padding – Pain turns to pressure
–Displacing pain – displace pain to another area of body, then to outside the body
–Post Hypnotic Suggestion – Cues – associate relief to deep breathing, seeing number 11 or two parallel lines
–Anchoring – touch self on shoulder or make "OK" finger sign when in trance and re-experience pain relief

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CONCLUSIONS

1. Chronic pain is a multifaceted problem involving biological, social, psychological factors
2. Research shows optimal treatment of chronic pain is from an early onset team approach which addresses all patient needs (not just medication, epidural blocks)
3. Physicians will best manage opioid therapy if psychological/social background issues are assessed and treated from the onset
4. Cognitive/Behavior therapy provides a value added component in returning patients to work, helping physicians manage patients, and moving their treatment forward

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