Teaching Pain Management

SGIM Precourse May, 2004
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Baystate Medical Center
Tufts University School of Medicine
Faculty

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- Matthew Bair, MD, Indiana University Purdue University Indianapolis
- Robert Brody, MD, University of California, San Francisco
- Paul Chelminski, MD, MPH, University of North Carolina at Chapel Hill
- Jaishree Hariharan, MD, Medical College of Wisconsin
- Yngvild Olsen, MD, MPH, Johns Hopkins University School of Medicine
- Alan Rubin, MD, University of Vermont
- Robert Sokolove, PhD, Boston University School of Medicine
Introductions

• Individual intros
• Me
  – Primary care general internist
  – Clinician-Educator
  – Philosophy *(work on the hard stuff)*
  – de facto “Expert”
• How many experts?
Two Approaches to the “hard stuff”

• Get better yourself
  – Knowledge, skills, attitudes
• Develop better systems
Goals

• Improve your practice of pain management
• Improve your teaching of pain management
• Use both individual and systems approaches
What we’re talking about

• Chronic Non-malignant pain
  – Persistent for months
  – Lasting greater than expected for healing
  – Usually lack demonstrable pathology
  – Some chronically active conditions
  – Neuropathic conditions a subset
  – Not cancer or terminal condition
  – Include patients w/substance abuse
The Burden of Chronic Pain

• More than 75 million Americans with persistent or recurrent pain.
• Annual health care costs average about $70 billion.
• 5% to 33% prevalence of chronic pain in primary care practices.
• Low back pain has disabled an estimated 7 million Americans.
• More than 8 million physician visits yearly in the United States.
• Provider burnout
Assumptions

• Management of Chronic Non-malignant Pain is difficult
• Teaching it is even harder
• Must be able to do it well to teach it well
• Opioids are neither “good” nor “bad”
Not included:

- Address role of CAM
- Methadone maintenance
- Buprenorphine
What is . . .

• Primer on pain management
• Look at context
• Put it together in practice
Day One

• Review important principles of pain management
  – Elements of pain management
  – Pain Assessment
  – Behavioral strategies
  – Adjuvant pharmacologic agents
  – Opioids and other analgesics

• Survey
Day Two

- Avoiding problems w/opioids
- Problem of comorbidities
- Teaching issues
- Practice
- Evaluation
Housekeeping

• Stick to schedule
• Allow time for discussion
• Audience input – panel as well
• Survey
• Materials
• Evaluations
• Interest Group
  – Thursday 7:00-8:30pm
Wednesday Schedule

• 1:00-1:15  Introduction/Overview
• 1:15-1:45  Elements of a Comprehensive Pain Management Plan
• 1:45-2:15  Assessment of Pain
• 2:15-3:00  Behavioral Strategies
• 3:00-3:15  Break
• 3:15-3:45  Adjuvant Therapies
• 3:45-4:30  Opioid and Other Analgesics
Thursday Schedule

- 8:00-8:30  Avoiding Rx Drug Abuse
- 8:30-9:00  Psychiatric Co-morbidities
- 9:00-9:30  Challenges of Teaching Setting
- 9:30-9:45  Break
- 9:45-10:45 Small Group Case Studies
- 10:45-11:15 Debrief
- 11:15-12:00 Wrap-up/Evaluations
Elements of a Comprehensive Pain Management Plan

Matthew J. Bair, MD, MS
Health Services Research & Development
Roudebush VA Medical Center
Indianapolis, IN
Caveats

• This talk will not be “comprehensive”
• Might not last the entire 30 minutes
• Unlikely to glean major “pearls”
• Little reference to teaching
• Role of “set-up” man
Current Chronic Pain Management in Primary Care

- Acute-care model emphasis
- Traditional biomedical focus ("cause and cure")
- Protracted diagnostic testing
- Integrated management underemphasized
Consequences

• Poor treatment response
• Providers and patients become frustrated
• Negatively impact functioning and psychosocial state
• Referral to specialty clinics
  – Aggressive interventions with questionable evidence base
Complexity of Chronic Pain Management

• Multidimensional nature of chronic pain
  – Biological
  – Psychological
  – Neurophysiologic systems
  – Emotional
  – Behavioral
  – Emotional and functional disability
Overall Management Approach to Chronic Pain

• Requires a rehabilitative focus
  – Pain reduction, improve functioning
• Biopsychosocial model as opposed to biomedical
Specific Goals of Chronic Pain Treatment

- Clarify diagnosis
- Improve pain control
- Improve functioning
- Provide access to “supplemental providers”
- Communicate and coordinate
- Improve other outcomes
1. Clarify the Diagnosis

- Review medical records/previous work-up
- Need for further diagnostic studies or procedures
- Pain assessment- 1st step in treatment plan
2. Improve Pain Control

- Help patient be more active/functional
- Promote use of noninvasive modalities
- Reduce patient’s fear of re-injury
- Teach proper body mechanics/posture
- Evaluate limitations and restrictions
Behavioral Management

• Help to change negative attitudes and thoughts
  – Inappropriate health seeking-behaviors, or poor coping
• Teach healthy, adaptive thoughts
Medication Management

• OTCs
• NSAIDs
• Weak/moderate opioids (combinations)
• Pure strong opioid agonists (Morphine)
• Agonist/antagonists agents (Butorphanol)
• Adjuvant medications (TCAs, SSRIs)
3. Improve Psychological Functioning

• Define and address psychosocial issues
• Address drug dependency
• Treat depression/anxiety (and insomnia)
• Assess family support/provide support
• Mental health consultation
Depression Management

• Depression is extremely common in chronic pain patients
• Comorbid depression and pain = poor outcomes
• Greater risk for suicidal thoughts
Anxiety Management

- Paced, deep breathing
- Progressive muscle relaxation
- Distraction techniques
- Mental health professional
- Medication management
Sleep Management

• Sleep problems are common in chronic pain patients

• Complications of poor sleep:
  – depression, poor concentration, increased pain, lack of motivation

• Low dose Tricyclic antidepressants (TOC)

• Relaxation and biofeedback
4. Provide Access to “Supplemental Providers”

- Physical therapist
- Occupational therapist
- Pain psychiatrist/psychologist
- Physiatrist
- Nurse/case manager
- Vocational counselor
- Orthopedist
- Neurologist
- Anesthesiologist
- Neurosurgeon
- Rheumatologist
- Social Worker
- Nutritionist
Potential Modalities for Chronic Pain Management

- Massage therapy, acupressure
- Acupuncture
- Relaxation skills training (Biofeedback)
- Individual psychotherapy or counseling
- Family group therapy or counseling
- Education groups (e.g. coping, stress)
Potential Modalities for Chronic Pain Management

- Recreational therapy
- Occupational therapy
- Vocational counseling
- Nutritional counseling
- Expressive therapies (e.g. art, dance, etc)
- Support group (e.g. alumni group)
5. Communicate and Coordinate Management

- Integrated approach to pain most effective
- Need expertise from a variety of providers
6. Improve Other Outcomes

- Improve quality of life
- Return to work and social interactions
- Reduce inappropriate use of health care services and medications
Functional Activities

• Inappropriate restriction of activity
• Physical Rehab helpful to assess:
  – Physical deconditioning and disuse
  – Poor posture and abnormal gait
• Interventions
  – Therapeutic exercises,
  – Heat, cold, TENS units
Social and Work Roles

• Return to employment is helpful:
  – Financially
  – Increase feelings of self-worth
  – Aid to cope with daily pain

• Supportive families associated with:
  – less pain intensity
  – Less reliance on pain meds
  – More active
Self-management of chronic pain is essential
Important Self-Care Tasks

• Restore and sustain activities in work and family life
• Engage in regular physical exercise
• Manage the effects of pain on emotions and interactions with others
Important Self-Care Tasks

• Pacing physical activities
• Use effective body mechanics to reduce flare-ups
• Appropriate use of health care services and pharmacologic treatments
Other Elements

• Establish long-term relationship
• Clarify expectations and goals
• Teach accurate reporting of pain
• Measures of pain, function (e.g. SF-36)
• Family input
• Regular periodic assessment
• Pain diary
Advanced Pain Management Techniques

• Management continuum: less invasive to more aggressive
• Short-term efficacy for epidural steroid injections?
• Refractory to other treatments
  – Anesthetic blocks
  – Spinal cord stimulators
  – Implantable spinal infusions
When to Refer to Comprehensive Pain Treatment Program

- Unremitting pain
- Ineffective treatment
- Poor functioning
- Increased depression or anxiety
- Patient feels pain is “intolerable”
Conclusions

• Chronic pain management is complex
• Paradigm shift from biomedical to biopsychosocial evaluation and management needed
• Patient participation is key
• Coordination/integration of providers knowledgeable in pain management
Pain Assessment and Pain Assessment Tools

Yngvild Olsen, MD, MPH
Johns Hopkins School of Medicine
SGIM Pre-Course, May 2004
Outline

A. Pain Assessment
   – Types of pain
   – Components of pain
   – Elements of pain assessment

B. Pain Assessment Tools
   – Issues in choosing which to use
   – Examples

C. Challenging groups

D. Useful web sites

E. Summary
Outline

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E. Summary
Case

43 yo female presents to residents’ clinic for initiation of primary care. She has a 20 year h/o type 2 DM for which she takes metformin, has uncontrolled htn on atenolol and hctz, and a history of non-adherence. Today her chief complaint to the intern is “my aching feet. You got to do something about my feet. I can’t stand it anymore.” Pt describes pain over past year as burning, occasionally shooting sensations in both distal feet, now involving ankles.
On exam, pt has decreased sensation to pinprick, absent ankle reflexes bilaterally, 1+ pitting edema bilateral feet/ankles, and an early Stage 1 ulcer on the lateral aspect of the right 5th toe.

• How do you educate the intern about the assessment of this patient’s pain symptoms?
Goals of pain assessment

1. Reach a diagnosis or reasonable differential diagnosis after initial assessment

2. Measure treatment effectiveness over follow-up visits
Types of pain

Duration-dependent definition

Acute vs Chronic

Chronic pain
  – chronic pain from malignant causes
  – chronic non-malignant pain

Categories based on pathological mechanisms
  – neuropathic
  – musculoskeletal
  – visceral
Acute pain

• Goal: provide rapid assessment so can provide immediate treatment of painful episode

• Focus on intensity of pain > functionality
Components of pain

- site
- duration
- intensity
- quality
- alleviating and aggravating factors
- pain interference
- pain beliefs
- pain coping mechanisms
Elements of pain assessment

• Believe that the patient is experiencing pain
Elements of pain assessment

- History: the evolution of pain
- Pain description
- Impact of pain
- Biopsychosocial context
- Associated stressors and reinforcers
- Physical examination
Functional Impact of Pain

• Work and recreational activities
• Sleep
• Mobility
• Appetite
• Sexual function
• Mood
Physical Examination

- Musculoskeletal
- Neurologic
- Brief psychiatric
- Other pertinent systems
- Common referred pain areas
Outline

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E. Summary
Pain Assessment Tools

- Over 100 pain assessment tools
- Majority are uni-dimensional
- Multi-dimensional
- Tools are adjuncts to help clarify a patients’ pain experience and for following effectiveness of treatment
- Pain assessment tools are not substitutes for good histories and physicals
Characteristics of good scale studies

• Strong rationale for introducing a new scale

• Validity addressed in initial study

• Reliability addressed in some way in initial study

Validity

• Usefulness of a scale in measuring what it sets out to measure in a certain target population.
• Extent to which pain scales appropriately measure pain.
• Extent to which pain scales appropriately measure functioning or patient quality of life.
Types of validity

- Content validity
- Construct validity
- Criterion validity
Content validity

• Degree to which items in a scale capture a specific domain of interest.

• Content validity determined by statistical techniques of factor analysis and principal components analysis.

• Purpose: to determine how many dimensions a group of variables/items measures when put together.
Construct validity

- Extent to which a scale measures the specific area or domain of interest

- Adequate assessment obtained from multiple studies

- Correlation coefficients between a scale and related dimensions
Criterion validity

• Measurement of scale’s association with at least one outcome

• Common outcome: the effects of pain treatment
Reliability

• Internal consistency
• Test-retest stability
Pain Assessment Tool
Examples
Simple Numeric Rating Scale

0-10 Numeric Pain Distress Scale

No Pain
0

Distressing Pain
1 2 3 4 5

Unbearable Pain
6 7 8 9 10
Visual Analog Scale (VAS)
Descriptive Pain Distress Scale

10 cm Descriptive Pain Distress Scale

None   Uncomfortable   Dreadful   Agonizing

Annoying
Wong-Baker FACES pain scale

Wong-Baker FACES Pain Rating Scale

0  No Hurt
1  Hurts Little Bit
2  Hurts Little More
3  Hurts Even More
4  Hurts Whole Lot
5  Hurts Worst
McGill Pain Questionnaire

- Measures pain intensity
- Includes a diagram for indicating location
- Uses 3 categories of words
  - Sensory
  - Affective
  - Evaluative
Multi-dimensional pain scales

- Often more diagnosis specific
- Examples
  - Arthritis impact measurement scales (AIMS)
  - Functional Assessment of Cancer Therapy Measurement System
  - Quality of Life survey for cancer
Brief Pain Inventory (Short Form)

Study ID# ___________________________
Hospital # ___________________________
DO NOT write on or over this line.

Date: ___________________________
Time: ___________________________
Name: ___________________________
Last Name ___________________________
First Name ___________________________
Middle Initial ___________________________

1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?
   1. yes   2. no

2) On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.

3) Please rate your pain by circling the one number that best describes your pain at its WORST in the past 24 hours.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain

   1 2 3 4 5 6 7 8 9 10
   Pain as bad as you can imagine

4) Please rate your pain by circling the one number that best describes your pain at its LEAST in the past 24 hours.

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   1 2 3 4 5 6 7 8 9 10
   Does not interfere

   1 2 3 4 5 6 7 8 9 10
   Partially interferes

   1 2 3 4 5 6 7 8 9 10
   Completely interferes

5) Please rate your pain by circling the one number that best describes your pain on the AVERAGE.

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   1 2 3 4 5 6 7 8 9 10
   Does not interfere

   1 2 3 4 5 6 7 8 9 10
   Partially interferes

   1 2 3 4 5 6 7 8 9 10
   Completely interferes

6) Please rate your pain by circling the one number that tells how much pain you have RIGHT NOW.

   0 1 2 3 4 5 6 7 8 9 10
   No Pain

   1 2 3 4 5 6 7 8 9 10
   Pain as bad as you can imagine

7) What treatments or medications are you receiving for your pain?

8) In the past 24 hours, how much RELIEF have you received from pain treatments or medications provided? Please circle the one percentage that most describes how much relief you have received.

   0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
   Complete Relief

9) Circle the one number that describes how much pain you experienced, during the past 24 hours. PAIN HAS INTERFERED with your:

   A. General Activity:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   B. Mood:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   C. Walking Ability:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   D. Normal work (includes both work outside the home and housework):

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   E. Relation with other people:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   F. Sleep:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

   G. Enjoyment of life:

   0 1 2 3 4 5 6 7 8 9 10
   Does not interfere

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The Chronic Pain Grade Questionnaire

• Measures 3 dimensions:
  – pain intensity
  – pain duration
  – disability

• 7-item instrument

• Allows for classification into 4 hierarchical categories of pain severity
Specialty assessment tools

• Neuropathic pain scale

• Pain Diary: pt self-report of when have pain, describe how it feels, and what medications or other things they do for the pain at that moment
Challenges

Pain assessment in particularly challenging populations:

• elderly
• dementia
• cultural/language differences
• addiction
Follow-up

• Document effectiveness and side effects of pain treatments

• Assess intensity of pain

• Assess changes in functional areas
Useful web sites

• Partners against pain:
  www.partnersagainstpain.com

• American Pain Society:
  www.ampainsoc.org

• American College of Rheumatology:
  www.rheumatology.org

• American Academy of Pain Medicine:
  www.painmed.org

• VA:
Summary

• In chronic pain, focus of assessment should be on functional impact of pain as much as intensity of pain

• Factors such as age, ability to communicate, cognitive function should drive which pain scale is used in pain assessment
• Doctor: “How was your visit with Dr. Sokolove? Did he help your pain?”

• Patient: “He’s a psychologist! I’m not crazy Doc. Do you think my pain is all in my head?”

• Doctor: “Yes.”
Teaching Behavioral Strategies for Managing Chronic Pain

Lessons From the Primary Care Clinic

Robert L. Sokolove, Ph.D.
Assistant Professor of Psychiatry

Division of Psychiatry
Boston University School of Medicine
Goals of Presentation

• Review selected evidence for efficacy of behavioral approaches to the management of chronic pain
• Discuss issues of regulation of patient expectations and anxiety through physician verbal reinforcement
• Dialogue on how best to support this behavioral skill development in residents.
Goals of Behavioral Intervention for the Primary Care Physician

Through verbal interventions increase patients’ positive expectations about the future and lower fear of pain to:

• **Increase** adaptive functioning in work, socialization and recreation.
• **Increase** pain tolerance.
Gate Control Theory of Pain: Cognitive Systems

- Sensory-discriminative
- Motivational-affective
- Cognitive-evaluative

_Melzack & Casey, 1968_
Melzack R, Casey KL. The Skin Senses 1986
Cognitive Pain Circuitry

Sensory-discriminative

- Thalamus
- Primary somatosensory cortex (SI)
- Secondary somatosensory cortex (SII)
- Primary motor cortex (MI)
- Secondary motor cortex (MII)
- Midbrain
- Cerebellum
Cognitive Pain Circuitry

Motivational-affective

Anterior cingulate cortex
Anterior insula
amygdala
Cognitive Pain Circuitry

Cognitive-evaluative
Dorsal lateral prefrontal cortex (DLPFC)
Ventrolateral prefrontal cortex
Orbitofrontal cortex (OFC)
Higher Cortical Aspects of Gate Control Theory

- Pain beliefs and expectations (DLPFC; OFC) modulate anxiety arousal (ACC; Amygdala) leading to “gating” of afferent and efferent thalamic pathways.

*Melzack & Casey, The Skin Senses, 1968*
Placebo Effect

• Effective in up to 30%, in some pain trials

• **Hypothesis**: higher cortical regulation of pain through endogenous opioid peptide (β endorphin) or other neuropeptide release

• Influenced by patient’s expectations

• Influenced by physician’s belief in the treatment efficacy
Placebo-induced Changes in fMRI in the Anticipation and Experience of Pain

Study 1

• fMRI in anticipation of painful shock using sham cream as analgesic placebo

Counterbalanced RTC

Groups I of Princeton undergraduates N=12

Group II of non-students N=12

Study I (Cont.)

Hypothesis 1

“If placebo manipulations reduce the experience of pain, pain-responsive regions of the brain should show a reduced fMRI blood oxygen level-dependent (BOLD) signal (a measure related to neural activity) during pain.”

Study 1 (cont.)

Hypothesis II

• “Placebo modulates activity of the pain matrix by creating expectations for pain relief, which in turn inhibit activity in pain processing regions. Stronger PFC activation during the anticipation of pain should correlate with greater reported placebo-induced pain relief and greater reductions in neural activity in pain regions”

Wager, Rilling, et.al., Science,
### A

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<th>anticipation</th>
<th>shock</th>
<th>rating</th>
<th>rest</th>
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<td>3, 6, 9, or 12</td>
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<td>20</td>
<td>4 - 8</td>
<td>4</td>
<td>40 - 50</td>
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### C

The diagrams illustrate the regions of interest, labeled as ACC, rACC, SII, TH, and INS, at specific time points (s).

- **ACC** (Area 24 and 25) in the prefrontal cortex is highlighted in yellow at various time points.
- **rACC** (reciprocal ACC) and **SII** (secondary somatosensory cortex) are also marked with black arrows.
- **TH** (thalamus) and **INS** (insula) are shown at different slices of the brain.
Goals of Behavioral Intervention for the Primary Care Physician

• “Anxiety” is the hard-wired behavioral response to the anticipation of danger.
• Verbal interventions that increase a patient’s personal sense of mastery and control over danger producing events lowers anxiety.
• Lower anxiety leads to better pain control.
Long term disability in the chronic pain patient is, in part, a product of both the physician’s expectations of the patient’s future dealing with pain, and the patient’s own expectations about their future with pain. The physician’s verbal interventions needs to target the beliefs and the behaviors related to these expectations.
Targeting Pain Behaviors

• Case-controlled inpatient study
• N=36 patients with low back pain
• Patient characteristics
  – Average age = 41.8 years
  – Average duration of pain = 92 months
  – Average number of surgeries for pain = 2.7

Typical Pain Behaviors

• Avoiding use of muscles or limb (e.g. limping)
• Avoiding employment
• Avoiding exercise
• Withdrawal from social situations
“The operant view proposes that acute ‘pain behaviors’, such as limping to protect a wounded limb from producing additional nociceptive input, may come under the control of external contingencies of reinforcement and thus develop into chronic pain problems”

Fodyce. Behavioral Methods for Chronic Pain and Illness, 1976
Targeting Pain Behaviors

Interventions

- Negative social reinforcement for avoidance behaviors and verbal pain behaviors
- Positive social reinforcement for meeting quotas of well behaviors (e.g. walking, social interaction, etc.)

Targeting Pain Behaviors

Results

- Uptime increased: 8.4 hours/day → 12.7 hours/day
- Highly significant decreases in intake of narcotic and hypnotic medications (p<.001)
- Tolerance for walking and sit-ups increased 100%
- Little change in subjective pain: 8.6 → 6.0
Typical Pain Beliefs

• “I can not tolerate the pain”
• “I am helpless in dealing with my pain and my life”
• “No one wants to be with someone who is constantly suffering”
“Perceived Self-Efficacy”

• One’s belief that one can perform a specific behavior or task in the future

• It refers to personal judgments of performance capabilities in a given domain of activity

Perceived Self-efficacy

• RCT, 2 arm outpatient study
• N=97 patients with arthritis
• Characteristics
  – Average age = 64.7 years
  – 86% female
  – Average level of education = 14.1 years

Lorig K et al. Arth and Rheum, 1989
Perceived Self-efficacy

Intervention

• Six weekly 2 hour arthritis education classes (Arthritis Self Management Course)

• Control group consisted of patients on wait list for Arthritis Self Management Course

Lorig K et al. Arth and Rheum, 1989
Perceived Self-efficacy

Results

• No association between changes in behavior (exercise, relaxation, and walking) and changes in health status (pain, disability, and depression)

• Robust association ($p<.01$) between perceived self-efficacy and health status at baseline and 4 months and significant differences between the two groups

Lorig K et al. Arth and Rheum, 1989
Perceived Self-efficacy

Conclusions

• Perceived self-efficacy is an important psychological variable that can effect health status

• Perceived self-efficacy can be changed by educational interventions

Lorig K et al. Arth and Rheum, 1989
Stepped Care for Back Pain: Activating Approaches for Primary Care

Study characteristics
N=226
RCT, two arm design with Tx. As usual control
90+ back pain days in 6mo. 58.2%
Mean age = 51.2 years
63% Ss female

Percentage of Patients Reporting Specific Worries About Back Pain 2 Months After Initial Visit

• The wrong movement might cause a serious problem with my back – 64%
• My body is indicating that something is dangerously wrong – 51%
• I am afraid of injuring myself if I exercise – 47%

Percentage of Patients Reporting Activity Limitations 2 Months After Initial Visit

- Doing less housework – 45%
- Decreased sexual activity – 41%
- Difficulty standing for short periods of time – 38%
Stepped Care for Back Pain: Activating Approaches for Primary Care

Intervention Topics

Common sources of back pain
“Red flags” indicating serious medical cond.
Handling back pain flare ups
Appropriate pacing of exercise and activity
The role of positive self talk in lowering avoidance
Posture and body mechanics

Stepped Care for Back Pain: Activating Approaches for Primary Care

Outcome measures

Attitudes toward back pain self care
Pain Intensity and Interference Scale
Roland Disability Questionnaire
SF 36 mental health inventory

Measures administered at baseline, 3, 6, and 12 months

Table 3. Outcome Data for Experimental Evaluation of Step-1 and Step-2 Interventions*

<table>
<thead>
<tr>
<th>Variable</th>
<th>2 Months after Seeking Care (Baseline)</th>
<th>5 Months after Seeking Care</th>
<th>8 Months after Seeking Care</th>
<th>14 Months after Seeking Care</th>
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</thead>
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<td>Mean worry score ± SD, on a scale of 0 to 10</td>
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<tr>
<td>Self-care group</td>
<td>5.72 ± 2.78</td>
<td>3.56 ± 2.91</td>
<td>2.86 ± 2.62</td>
<td>2.40 ± 2.54</td>
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<tr>
<td>Usual-care control group</td>
<td>5.96 ± 2.58</td>
<td>4.46 ± 2.97</td>
<td>3.95 ± 2.90</td>
<td>3.45 ± 2.89</td>
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<tr>
<td>P value</td>
<td>0.001</td>
<td>&lt;0.001</td>
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<td>Mean fear-avoidance scale score ± SD, on a scale of 1 to 4</td>
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<tr>
<td>Self-care group</td>
<td>2.32 ± 0.54</td>
<td>1.97 ± 0.56</td>
<td>1.98 ± 0.54</td>
<td>1.97 ± 0.58</td>
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<tr>
<td>Usual-care control group</td>
<td>2.29 ± 0.55</td>
<td>2.15 ± 0.56</td>
<td>2.16 ± 0.54</td>
<td>2.12 ± 0.56</td>
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<tr>
<td>P value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.02</td>
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<tr>
<td>Mean pain-intensity score ± SD, on a scale of 0 to 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care group</td>
<td>5.36 ± 1.96</td>
<td>3.79 ± 2.13</td>
<td>3.27 ± 2.14</td>
<td>3.00 ± 2.07</td>
</tr>
<tr>
<td>Usual-care control group</td>
<td>5.47 ± 2.00</td>
<td>4.04 ± 2.15</td>
<td>3.90 ± 2.30</td>
<td>3.41 ± 2.22</td>
</tr>
<tr>
<td>P value</td>
<td>&gt;0.2</td>
<td>0.004</td>
<td>0.05</td>
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<tr>
<td>Mean Roland Disability Questionnaire score ± SD, on a scale of 0 to 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Self-care group</td>
<td>8.99 ± 6.29</td>
<td>6.01 ± 5.70</td>
<td>5.56 ± 5.93</td>
<td>5.33 ± 6.17</td>
</tr>
<tr>
<td>P value</td>
<td>0.003</td>
<td>0.002</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Patients with significant work disability due to back pain in the previous 3 months, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care group</td>
<td>17.8</td>
<td>12.6</td>
<td>7.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Usual-care control group</td>
<td>19.8</td>
<td>10.2</td>
<td>9.0</td>
<td>7.0</td>
</tr>
<tr>
<td>P value</td>
<td>&gt;0.2</td>
<td>&gt;0.2</td>
<td>&gt;0.2</td>
<td>&gt;0.2</td>
</tr>
</tbody>
</table>

* Data taken from references 18 and 19. A total of 481 patients were studied.

**Table 1. A Stepped-Care Approach for Managing Back Pain in Primary Care**

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Targeted Patients</th>
<th>Objectives</th>
<th>Source of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>All patients with back pain</td>
<td>To identify and address specific patient worries and to encourage return to normal activities.</td>
<td>Primary care clinician supported by self-care educational materials.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Patients with back pain who still have activity limitations at 6 to 8 weeks</td>
<td>To help patients identify difficulties, set functional goals, and define and carry out plans to achieve their goals. To provide support for resumption of activities and exercise.</td>
<td>Case manager (such as a nurse or physical therapist) in an individual or group format, supported by self-care educational materials.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Patients with back pain who have substantial disability in work or family roles</td>
<td>To provide interventions to restore work and family role function. To provide a graded exercise program. To treat psychological illness if present.</td>
<td>Case manager and/or referral for rehabilitation. Psychological treatment (if indicated) in primary or specialty care.</td>
</tr>
</tbody>
</table>

*Von Korff et al., Ann Intern Med., v. 134, pp. 910-917*
Decrease Pain Behaviors
Office Practice

Discuss with significant others in the patient’s life the practice of:

– Selectively ignoring pain behaviors
– Reinforcing adaptive functioning and healthy pleasure seeking activities
Decrease Pain Behaviors
Office Practice

• Discuss expectations for continued or reemployment with expected increases in pain tolerance

• Sign disability forms only for limited periods
Decrease Pain Behaviors
Office Practice

• Mutually set realistic improvement goals in a doable time frame
• Ask: “what did you use to enjoy that you have had to give up because of your pain?”
Perceived Self-efficacy

• Enhanced by increased knowledge and subsequent ability to predict
• Enhanced by increased coping skills leading to more positive assessment of one’s ability to deal with threat
Enhance Self-efficacy
Office Practice

• Increase the patient’s knowledge of chronic pain syndrome
  – Discuss the etiology and prognosis of their disorder with as much candor as possible
  – Realistically discuss the probable chronic nature of their pain and how to handle “flare ups”
Enhance Self-efficacy
Office Practice

• Discuss pain medications with the expectation that they may be decreased or even discontinued with the patient’s increase in pain tolerance
Decrease Negative Emotions
Office Practice
Depression

- Allow patient to grieve the loss of former functioning. This may be similar to facilitating the grief process of an amputee patient.

- Assertively prescribe antidepressants (e.g. SSRI’s, novel AD’s) for depressive symptoms and for sleep (e.g. amitriptyline, trazadone).
Suggested Protocol for Behavioral Interventions in Primary Care

• Weekly visits for one month upon CPS dx
• Biweekly visits for the next two months.
• Monthly visits X 1 year starting three months after CPS dx.
Behavioral Interventions: Limitations

- Intelligence and years of schooling
- Social Economic Status
- Co-morbid Psychiatric and Substance Use Disorders
- Language barriers
- Cultural differences
- Past learning history relevant to the issues of mastery and self-efficacy
Teaching Behavioral Interventions to Medical Residents

• Using a “biopsychosocial” model of chronic illness instead of a “biomedical” model.

• Attendings should role-modeling verbal interventions for increasing positive expectations in chronic pain patients.

• Clinics should have appropriate media to aid residents in explaining self-care to pts.
Adjuvant Analgesics

Daniel P. Alford, MD, MPH
Clinical Addiction Research and Education Unit
Section of General Internal Medicine
Boston Medical Center
Boston University School of Medicine
What are adjuvant analgesics?…

• Doctor: “How is your pain on the new medication I prescribed 2 weeks ago?”

• Patient: “I looked it up on the internet…it said it was for depression so I didn’t take it…doc, don’t you believe that my pain is real?…I am not depressed!”
Adjuvant Analgesics

- Diverse group of medications that are non-NSAID, non-acetaminophen, non-opioid
- Misnomer as several constitute first-line therapy
- Primary FDA indication other than pain
- Analgesic in selected circumstances
- Side effects often apparent in days but analgesic effect in weeks
Adjuvant Analgesics

- Antidepressants
- Anticonvulsants
- Muscle relaxants
- Neuroleptics
- Benzodiazepines
- Anesthetics
Mechanism-Specific Pain Management

- Nociceptive pain
  - Heat and cold
  - Mechanical force and chemical irritants

- Inflammatory pain
  - Inflammation
  - Tissue damage

- Neuropathic pain
  - Peripheral nerve damage → sensitization

- Functional pain
  - Abnormal central processing

Woolf CJ. Ann Intern Med 2004;140:441-451
Mechanism-Specific Pain Management

- Nociceptive pain
  - Heat and cold
  - Mechanical force and chemical irritants

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  - Inflammation
  - Tissue damage

- Neuropathic pain
  - Peripheral nerve damage → sensitization

- Functional pain
  - Abnormal central processing

Woolf CJ. Ann Intern Med 2004;140:441-451
Clinical Neuropathic Pain

![Graph showing pain sensitization](image)

- **Hyperalgesia**
- **Allodynia**
- **Normal pain response**

**Axes:**
- **Pain intensity** (0 to 10)
- **Stimulus intensity**
Neuropathic Pain

Peripheral Sensitization and Central Sensitization

(Na\(^+\) and Ca\(^{++}\) channels, NMDA receptor)
Central Sensitization

“Wind-up”
Hyperalgesia
Central Sensitization

“Wind-up” Hyperalgesia

Descending Pain Inhibition

Periaqueductal Gray

(NE, 5HT)
Chronic Pain Studies

US Prevalence (millions of cases)

- Tic Douloureux
- HIV-Associated Pain
- Poststroke Pain
- Phantom (postamputation) Pain
- Multiple Sclerosis
- Causalgia or Reflex Sympathetic Dystrophy
- Spinal Cord Injury
- Cancer-Related Pain
- Postherpetic Neuralgia
- Diabetic Neuropathy
- Low Back Pain
Antidepressants General Points

• Precise mechanism of analgesia unknown

• “Monoamine hypothesis”
  – Correct deficit of monoamine neurotransmitters (e.g., serotonin, norepinephrine)

• Membrane stabilization

• All with slow onset of action
Tricyclic Antidepressants

- Inhibit norepinephrine and/or serotonin reuptake
- Membrane stabilization through inhibition of sodium channels
- Inhibit neuronal hyperexcitability via NMDA antagonist-like effect
Tricyclic Antidepressants

• 12 RCT’s (PHN and PDN)
• Antidepressant effects independent of analgesia
  – Analgesia occurs at lower doses
• May be synergistic with opioids
• Numerous side effects
• Efficacy takes up to 2 weeks
Tricyclic Antidepressants
Secondary Amine Compounds

- Nortriptyline (Pamelor) - 10-150mg
- Desipramine (Norpramin) - 10-150mg

Properties
- Selective inhibitors of NE reuptake
- Fast onset (days)
- Less anticholinergic and sedating

Efficacy in PDN (N and D) and PHN (D)
Start 10 mg qhs with weekly increases
Tricyclic Antidepressants
Tertiary Amine Compounds

• Amitriptyline (Elavil) 10-150mg
• Imiprimine (Tofranil) 10-150mg
• Properties
  – Inhibitors of both NE and serotonin reuptake
  – Slow onset (weeks)
  – More anticholinergic and sedating
• Efficacy in PDN (A and I) and PHN (A)
• Start 10 mg qhs with weekly increases
SSRI Antidepressants

- Paroxetine (Paxil) 20-50mg
- Fluoxetine (Prozac) 20-50mg

RCT’s
- Inconsistent, slightly better than or equal to placebo
- Paroxetine better than fluoxetine in PDN
- Always less effective than TCA’s
- Efficacy seen in depressed pain patients

- Better tolerated than TCA’s
- Start at 20mg qAM with ↑ 10mg q1-2 wks
Meta-Analysis for Antidepressants

- Effective for neuropathic pain with similar results for all TCA’s
- SSRI’s less effective, but 50% less side effects
- Given 100 patients with neuropathic pain treated with TCA’s
  - 30 with 50% improvement in pain symptoms
  - 30 minor adverse effects
  - 4 major adverse effects ➞ d/c treatment

McQuay, H An evidence-based resource for pain relief 1999
SNRI Antidepressant

- Venlafaxine (Effexor)
- Dual mechanism of action (serotonin and norepinephrine reuptake inhibitors) at high doses
- Analgesic effects in experimental animals
- RCT efficacy in preventing migraines, relieving PDN, painful polyneuropathy
- Tolerability comparable to SSRI
Anticonvulsants General Points

• Most effective with lancinating electric-like pain

• First line therapy (carbamazepine) for trigeminal neuralgia (tic douloureux)

• Mechanism unclear, presumed to suppress or limit the spread of aberrant neuronal discharges through neuronal sodium channel blockade
Anticonvulsants 1\textsuperscript{st} Generation

- Carbamazepine (Tegretol)
  - RCT’s - 6
  - PDN, PHN, Trigeminal neuralgia (1st choice)
  - Most effective for lancinating pain
  - Significant side effects (hematologic)

- Phenytoin (Dilantin)
  - RCT’s -3 (PDN)
  - Can worsen hyperglycemia by inhibiting insulin secretion
Anticonvulsant 2nd Generation
Gabapentin (Neurontin)

- FDA approved for treatment of seizures and postherpetic neuralgia
- Off-label use common for other pain syndromes, migraine headache prevention, and mood disorders
- One report – 71% of prescriptions for chronic pain and 8% for seizures and neuralgia

The Medical Letter April 12, 2004. Vol 46; 29-31
Gabapentin (Neurontin)

- Analog of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA)
- Mechanism of action in pain relief is unclear
  - Does not act at the GABA receptor
  - Binds to specific subunits of calcium channels which may interfere with transmission of noxious stimuli
Gabapentin (Neurontin)

- Favorable side effect profile
- Does not induce or inhibit hepatic microsomal enzymes
- Mild withdrawal syndrome
- Start at 100mg TID with increase by 300mg q 7 days.
- Wide therapeutic dosing range
- Most require between 100-3600 mg/d
Gabapentin for the Symptomatic Treatment of Painful Neuropathy in Patients With Diabetes Mellitus
A Randomized Controlled Trial
Miroslav Backonja, MD; Ahmad Beydoun, MD; Keith R. Edwards, MD; Sherwyn L. Schwartz, MD; Vivian Fonseca, MD; Marykay Hes, BS; Linda LaMoreaux, MPH; Elizabeth Garofalo, MD; for the Gabapentin Diabetic Neuropathy Study Group

Gabapentin for the Treatment of Postherpetic Neuralgia
A Randomized Controlled Trial
Michael Rowbotham, MD; Norman Harden, MD; Brett Stacey, MD; Paula Bernstein, MS; Leslie Magnus-Miller, MD; for the Gabapentin Postherpetic Neuralgia Study Group

JAMA. 1998;280
Gabapentin (Neurontin)

- Multicenter, randomized, double-blind, placebo-controlled 8-week trial
- n=165 patients with painful diabetic neuropathy
- Primary outcome: daily pain severity
- Secondary outcomes: sleep interference, quality of life and mood scores
Painful Diabetic Neuropathy

A

Mean Score

Pain

Placebo

Gabapentin

Screening 1 2 3 4 5 6 7 8

6

5

4

3

2

1

0

†

* A

B

Sleep Interference

Mean Score

Screening 1 2 3 4 5 6 7 8

8

6

4

2

0

†

†

†

†

†

†

†
Table 3.—Most Frequently Reported Adverse Events*

<table>
<thead>
<tr>
<th>Preferred Terms</th>
<th>Gabapentin (n = 84)</th>
<th>Placebo (n = 81)</th>
<th>P Value†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dizziness</td>
<td>20 (23.8)</td>
<td>4 (4.9)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Somnolence</td>
<td>19 (22.6)</td>
<td>5 (6.2)</td>
<td>.004</td>
</tr>
<tr>
<td>Headache</td>
<td>9 (10.7)</td>
<td>3 (3.7)</td>
<td>.13</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>9 (10.7)</td>
<td>7 (8.6)</td>
<td>.79</td>
</tr>
<tr>
<td>Confusion</td>
<td>7 (8.3)</td>
<td>1 (1.2)</td>
<td>.06</td>
</tr>
<tr>
<td>Nausea</td>
<td>7 (8.3)</td>
<td>4 (4.9)</td>
<td>.54</td>
</tr>
</tbody>
</table>

*Data are number (percentage).
†Data were calculated using the Fisher exact test.
Anticonvulsant 2nd Generation
Lamotrigine (Lamictal)

• Mechanism of action unknown
  – ? blocks voltage dependent Na⁺ channels
  – ? Inhibits release of excitatory neurotransmitters (e.g., glutamate, aspartate)

• Double-blind, placebo controlled studies
  – Diabetic painful neuropathy
  – HIV- associated peripheral neuropathy
  – Trigeminal neuralgia
Lamotrigin (Lamictal)

- Optimal dose not known
- Start at 25-50mg QD with slow increase every 14 days up to 200-500 mg (divided dose)
- 10% develop rash
- Long-term use may lead to visual changes due to accumulation of melanin
Tramadol (Ultram)

• “A new class of analgesic”
• Provides analgesia via at least 2 mechanisms
  – 30% effect – low binding to opioid receptors
  – 70% of effect – mild inh of NE and serotonin reuptake
• Adverse effects – N/V, constipation, sedation
• Adverse effects dose-related and transient
• May lower seizure threshold (e.g., caution when used with bupropion)
• Clinical physical dependence
• ?Abuse potential
Tramadol (Ultram)

- Multicenter, Randomized, double-blind placebo-controlled trial
  - 131 patients with PDN
  - 42-day treatment phase
  - Primary outcome - mean pain intensity scores
  - Secondary outcome - pain relief and quality of life scores

Harati Y et al. Neurology. 1998
Tramadol (Ultram)
Topical Agents
Capsaicin (Capzasin - P, Zostrix)

- Extracted for hot chili peppers
- Apply cream to areas of pain TID-QID
- Causes local release and depletion of Substance P from terminals of unmyelinated C fibers
- Initial burning sensation followed by anesthesia
- RCT’s - 5
  - Inconsistent findings in PDN and PHN
  - Pain relief modest and can take several
Topical Agents - Lidocaine

- Local anesthetic agent - sodium channel blockade with ↓ in ectopic impulses
- Lidocaine patch 5% (Lidoderm)
  - Efficacy in PHN when placed over painful region
  - No clinically relevant serum levels (3% of dose absorbed)
  - Peak concentration is 1/10th used in cardiac arrhythmias)
  - Apply up to 3 patches to intact skin, covering most painful site for up to 12 hrs/d (12 hrs on; 12 hrs off)
Number Needed to Treat *(NNT)*

* to obtain one patient with 50% pain relief

<table>
<thead>
<tr>
<th></th>
<th>PDN</th>
<th>PHN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCA</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td>SSRI</td>
<td>6.7</td>
<td>ND</td>
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<tr>
<td>Gabapentin</td>
<td>3.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>ND</td>
<td>2.5</td>
</tr>
<tr>
<td>Tramadol</td>
<td>3.4</td>
<td>ND</td>
</tr>
<tr>
<td>Capsaicin</td>
<td>5.9</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Sindrup SH, Jensen TS. Pain. 1999
Mechanism-Specific Pain Management

Brain

Descending inhibition
(NE, 5HT)

Peripheral sensitization
(Na\(^+\) channels)

Spinal cord

Central sensitization
(Ca\(^{++}\) channels, NMDA receptor)

- TCA
- SSRI
- SNRI
- Tramadol

PNS

- TCA
- Lidocaine
- Lamotrigine

- Gabapentin
When teaching about adjuvant analgesics...

- Define adjuvant analgesics
- Teach mechanism-specific pain management
- Frame treatment strategies with specific pain neurobiology
- Pain relief is modest
Pain Management and Substance Abuse

Robert V. Brody, M.D.
Statement of the problem

On one hand:
• No one wants to be deceived
• No honest provider want to participate in a system of abuse and addiction.
• The regulatory environment favors erring on the side of withholding controlled pain medications, contributing to “opiophobia”
Statement of Problem

On the other hand,

• Studies consistently demonstrate under-treatment of pain.

• Professional obligation to patients:
  “The task of medicine is to cure sometimes, to relieve often, and to comfort always.”

  Ambroise Pare
Mutual mistrust in the medical care of drug users

J. Merrill JGIM

• “Physicians were fearful of being deceived by patients with opiate addiction.

• The lacked a standard approach to assessment or treatment of clinical issues, especially management of pain and opiate withdrawal.
Mutual mistrust in the medical care of drug users
J. Merrill JGIM

• They avoided engaging patients regarding key complaints, and expressed discomfort and uncertainty in their approach.

• Patients were sensitive to the possibility of poor medical care, equating physician inconsistency with intentional mistreatment.”
Definitions:
American Society of Addiction Medicine
American Academy of Pain Medicine
American Pain Society

Physical dependence is a state of adaptation that is manifested by a drug class-specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist.
Definitions:

**Tolerance** is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug’s effects over time. May occur both to the analgesic effects of opioids and to unwanted side effects such as respiratory depression, sedation, nausea.
Definitions:

**Addiction** is a primary, chronic, neurobiologic disease, with genetic, psychosocial and environmental factors influencing its manifestations. It is characterized by behaviors that include:

- Impaired control over drug use
- Compulsive use
- Continued use despite harm, and
- Craving
Definitions:

**Pseudoaddict:** patient with a chronic painful condition who requires opioids for the treatment of pain in order to function.
Behaviors that may predict addiction:

- Doctor shopping
- Obtaining analgesics from drop-in settings
- Increasing prescribed dose or frequency
- Seeking early refills
- Losing prescriptions / medications
- Forging a prescription
- Obtaining drugs from street sources
- Demanding drugs of higher street value
Behaviors that may predict addiction:

- Hoarding unused medications
- Non-adherence to recommended non-opioid treatments or evaluations
- Insistence on rapid acting formulations or routes of administration
- Supplementing analgesics with alcohol or other psychoactive drugs
- Using analgesics to relieve symptoms other than pain
Screening for substance abuse:

- Have you ever tried to stop using or cut down?
- Has your family or anyone else ever complained about or discouraged your use?
- Have you ever had trouble with driving while under the influence?
- Did you ever get into trouble or have difficulty at work or school due to your use?
- Have you ever been injured while under the influence.
Urine toxicology - know your laboratory

- Amphetamines 2-4 days
- Barbiturates 3 days
  - Phenobarbital > 2 weeks
- Cannabinoids 10 days
  - Chronic user > 30 days
- Cocaine metabolite 2-3 days
- Methadone 2-3 days
- Other opiates 2-3 days
- Propoxyphene 3-7 days
- Phencyclidine (PCP) 3-8 days
Confirmatory tests: gas liquid chromatography, mass spectrometry, high performance liquid chromatography

Urine toxicology - beating the test

- Substitution
- Adulteration with chemicals
- Dilution

Substance Abuse and Mental Health Services Administration uses a cutoff of specific gravity of 1.003 and urine creatinine concentration of 40mg/ml
Pass the test!!

Powdered Urine

How can you fail with a pure, clean sample?

Dehydrated Urine kit

$35.00 plus shipping
ups only

$5 bucks cheaper than anyone!!

Order

Comes With:

Pure Sample
Sample Heater
container

Pass that employment urine test every time!!

Keep your privacy..private

Human/Synthetic

Navigate back to other parts of 420 Heaven
Street value of selected drugs:

- Hydromorphone - Dilly: $15/4mg
  - dilaudid with D higher
- Oxycodone including Percs: $5-10
- Tylenol with codeine: $2-3
- Oxycontin - OC: $.25/mg
- MSContin: $.25/mg
- Clonidine: $1-2
- Phenergan: $1-2
- Vicodin: 3 for $5
- Methadone liquid, pill, wafer: $10/10mg
- Klonopin: $2-3
- Valium and Xanax: $1-2
- Ecstasy: $20
- Speed: Crank: < $15
  - Glass, crystal meth: $60/gm
- Heroin: $30/gm
- Crack cocaine: $30/gm
- Speed ball: $10 heroin, $10 cocaine: $15
The provider-patient relationship, like most human relationships, is two sided. The provider and the patient both have rights and both have responsibilities. Sometimes these should be made explicit. Establish the rules early. Be prepared to enforce them.
PROVIDER/PATIENT AGREEMENT FOR CONTROLLED
SUBSTANCES FOR PAIN OR OTHER MEDICAL CONDITION

I, ___________________________ , and ___________________________ , have decided, together, to use a controlled substance for management of chronic pain or other medical condition due to:

Good faith efforts to diagnose and treat the condition have been done and will continue. Appropriate consultations will occur when indicated. We also feel it is important to use controlled substances to help manage pain or other medical conditions. It may not be possible to totally stop the pain or other symptoms.

The current medication(s) are:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Instructions</th>
<th>Amount Per Week/Month</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Because of legal concerns about selling or misuse of prescribed controlled substances,

- You agree that this medication will only be used by yourself and as prescribed.
- If you run out of medication because you increased the dose without talking to the prescriber, we will not refill the prescription early.
- Lost or stolen medications will not be replaced.
- You will not seek controlled substances from other sources.
- Pharmacy records may be reviewed to confirm prescriptions.
- Medications will only be refilled during usual office hours.
- Urine or blood screening may be randomly performed for drugs.
- This contract will be reviewed ___________________________.
- Other terms:

__________________________

Consequences: If you break these rules, we will not continue to prescribe the above medications for you.

__________________________  ___________________________
Patient’s Signature         Date

__________________________  ___________________________
Provider’s Signature        Date
When the prescribing rules are violated there is no necessity to stop seeing the patient - don’t abandon the patient. Rather refuse to prescribe controlled substances, at least temporarily, while providing other care.

A urine positive for cocaine disqualifies the patient from a prescription for a controlled substance, at least until the urine is negative for cocaine.
It is in the patient’s best interest to insist on certain conditions for prescribing controlled substances, e.g. concurrent treatment for substance abuse and/or mental health problems.

- Brush up your pharmacology
- Give up your opiophobia
- Give up overuse of IM and IV analgesics
- Recognize pharmaceutical company hype and medical myths
• Patients using / taking opioids chronically will require higher doses than others
• Use long acting, not short acting, opioids
• Use scheduled, not prn, dosing.
• Minimize regulatory distortion of medical practice
• Document what you do
• Be aware of the environment
• Keep a complete record
• One prescriber of all psychotropic meds
• Write down what you’ve done
• Obtain information from sources other than patient
• Make sure your notes are thorough
• Include non-controlled substances and non-pharmacologic approaches as indicated
• Commit your thinking to paper / screen
• Consult early and often
• Detail what’s happening
• Keep your eye on the patient
• “The aim of medicine is surely not to make men virtuous; it is to safeguard and rescue them from the consequences of their vices.”

H.L. Mencken
FORENSIC NECROPSY REPORT

PERFORMED FOR: Jim Pope, Sheriff-Coroner  County: Shasta

NAME: Rebecca Mae Williams  Case Number: C98-650

DEMOGRAPHICS:

Date of Necropsy: August 10, 1998  Time:  1005 hours

Age: 34  Race: Cau.  Sex: F  DOB: 01/25/64  DOD/D: 08/06/98  TOD/D: 1247 hours

Wt.: 145 lb.  Length: 5' 4"  Hair: Brown  Eyes: Hazel

NECROPSY FINDINGS:

1. Continued, complicated fracture of skull, massive.
2. Fracture of vertebral spine, complete (T12, L1, and L2) — complete transverse luxation.
4. Fracture of sternum, ribs, and pleura.
5. Laceration of spleen, liver, and kidneys, and small intestine, severe.
6. Hypertension marks of skin of right and left inguinal folds, left more than right.
7. Lethal levels of oxycodone in blood and liver.

CAUSE OF DEATH - DURATION:

A. Lethal level of oxycodone (21 mEq/L), lower lethal level — 5 mEq/L — hours.

OTHER SIGNIFICANT CONDITIONS:

None.

The information provided herein is correct to the best of my knowledge and belief.

Harold N. Harrison, M.D., FCAP  
Forensic Pathologist  
10/23/98

HNH: 543  
F: 10/22/98
Chronic Pain: Crossroads of Clinical Medicine & Mental Health

The Experience in the UNC General Internal Medicine Practice

Paul R. Chelminski, MD, MPH
Timothy J. Ives, PharmD, MPH, CPP
DISEASE MANAGEMENT PROGRAM FOR PATIENTS WITH CHRONIC NON-MALIGNANT PAIN

• **Objectives**
  • Decrease pain
  • Improve functional status
  • Identify and treat depression
  • Identify and reduce substance misuse
UNC General Medicine Pain Program & Study

• Early appreciation of burden of psychiatric comorbidity: especially depression and substance misuse
• Surprise at magnitude of substance misuse
• Concomitant increase in opioid-related deaths in NC linked to diversion of prescription drugs
• Death directly related to opioids diverted from our practice
• Response:
  • Intensification of depression therapy (and other psychiatric conditions)
  • Systematic monitoring of substance misuse
The Process: Disease State Management Program

Quality Paradigm

- Structure
- Process
- Outcomes
- External evidence and internal evidence
- PDSA cycles as process for reaction and pro-action
Chronic Pain & Mental Health: The Triad

• Chronic pain, mental illness, and substance misuse

• Strong linkage between chronic pain and depression: > 50% [Arch Intern Med 2003; 163: 2433-45]

• Independent relation between depression and functional limitations [JAMA 1989; 262: 914-19]
Chronic Pain & Mental Health: The Interaction

- Substance and alcohol dependence and psychiatric disease [JAMA 1990;264:2511-18]
  - Major depression: 32%
  - Bipolar depression: 61%
  - Schizophrenia: 47%
  - Personality disorders 84%
  - Anxiety disorders: 24%
- Comorbid psychiatric conditions predict substance misuse disorders and negative outcomes [Am J Psychiatry 160:5]
- Identifying pain patients at risk for substance misuse a challenge
Chronic Pain and Opioids: The Conundrum

• Rational use of opioids advocated
• How to effectively manage patients with chronic non-malignant pain with a class of medications with a potential for misuse in a population at high risk for misuse?
• Little evidence-based guidance for the general medicine setting
• Clinical trials of opioids and chronic pain:
  • Occur in specialty setting with selected populations
  • Exclude patients with history of substance misuse
  • Usually exclude patient with any psychiatric diagnosis, including major depression
ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients, Peridone in one, and hydrocodone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug Surveillance Program
Boston University Medical Center

Waltham, MA 02154


Citation: NEJM1980; 302(2): 123.
Substance Misuse/Abuse: Prescription Drugs

- Substance misuse behaviors common in Yale University study of VA and resident clinics (24% and 31% of patients receiving opioids) (JGIM 2002;17:173-179)
- 2000 SAMHSA* Survey: 3.9 million prescription drug abusers; 2.1 million abused cocaine or heroin
- HSDA* estimated 3 million new non-medical users of in 2001 among teens and young adults

*Source: United States Department of Health and Human Services
SAMHSA: Substance Abuse and Mental Health Services Administration
HSDA: National Health Survey of Drug Abuse
Prescribing Opioids Well: Obstacles for Our Practice at UNC

- Part-time providers
- Physicians in training
- Frequent provider turnaround
- Population with comorbidities
- Geographically dispersed, indigent population (access to care)
- No systematic approach to problem
The Challenge

• How to harness the pain relieving properties of opioids and deliver systematic, evidence-based care in a practice environment with inherent structural discontinuities

• More complex problem than CHF, diabetes, anti-coagulation where research supporting efficacy awaits better systems to insure effectiveness
Methods & Tools:

• Multidisciplinary disease management program*
• Clinical pharmacist practitioner and psychiatrist evaluated and managed patients in consultation with primary provider
• 3 month, before and after study with monthly follow-up
• Encouraged referral of patients whose pain was difficult to manage or substance misuse suspected
• Medication algorithms
• Outcomes measured at baseline and 3 months
  • Pain: Brief Pain Inventory
  • Depression: CESD-20
  • Disability: Pain Disability Index

* IRB 02-MED-382
Substance Misuse Monitoring

- History
- Documentation using electronic medical record
- Medication contract
- Direct communication between internist and clinical pharmacist
- Urine toxicological screen (UTS)
- Criminal background checks
Substance Misuse

- Substance Misuse:
  - Cocaine or amphetamines on UTS
  - Doctor collecting/shopping
  - Adulteration/forgery of prescriptions
  - Diversion
  - Persistent (“clean”) negative urines
  - Inconsistent UTS
- Pain Review Committee
- Discontinuation of opioids
- Referral for counseling
Program Personnel

• General internists
• Psychiatrist with pain specialization
• Clinical pharmacist
• Toxicologist
• Nurses
• Program assistant
• Substance abuse counseling by referral
Urine Toxicological Screen

<table>
<thead>
<tr>
<th>Date</th>
<th>Code</th>
<th>Test</th>
<th>Comment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/25/2003</td>
<td>1206</td>
<td>URINE TOX SCREEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08/25/2003</td>
<td>232</td>
<td>AMPHETAMINE</td>
<td>=/&gt;500 ng/mL</td>
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</tr>
<tr>
<td>08/25/2003</td>
<td>233</td>
<td>BARBITURATE</td>
<td>&lt;200 ng/mL</td>
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</tr>
<tr>
<td>08/25/2003</td>
<td>234</td>
<td>BENZODIAZEPINE</td>
<td>&lt;100 ng/mL</td>
<td>NOT</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>235</td>
<td>CANNABINOID</td>
<td>=/&gt;50 ng/mL</td>
<td>DETECTED</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>236</td>
<td>COCAINE,UR METAB</td>
<td>=/&gt;300 ng/mL</td>
<td>NOT</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>238</td>
<td>METHADONE</td>
<td>&lt;300 ng/mL</td>
<td>DETECTED</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>239</td>
<td>METHAQUALONE</td>
<td>&lt;300 ng/mL</td>
<td>DETECTED</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>240</td>
<td>OPIATE</td>
<td>&lt;300 ng/mL</td>
<td>NOT</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>241</td>
<td>PCP</td>
<td>&lt;25 ng/mL</td>
<td>NOT</td>
</tr>
<tr>
<td>08/25/2003</td>
<td>244</td>
<td>PROPOXYPHENE</td>
<td>&lt;300 ng/mL</td>
<td>NOT</td>
</tr>
</tbody>
</table>

The positive screening test(s) below detected drugs belonging to the indicated class or another similar substance. Confirmation of positive screening results is available on request.
Medication Contract

Patient Name ______________________________________
Diagnosis  ______________________________________

I agree to abide by the following guidelines for managing my prescription(s) for pain medications:

I will only request and receive opiate (narcotic) pain medications and other controlled substances that may help in the management of pain from Dr. ____________________ or from his/her designee in the Internal Medicine Clinic Pain Service.

I agree to inform any other physicians participating in my care of this agreement. If another physician wishes to suggest changes in pain management, they can contact Dr. ____________________ during regular business hours, but no changes will be made without such contact.

Dr. ___________ and I have agreed that I will receive the following:
Medicine ______________, directions ____________ quantity _____, per ___ days.
North Carolina Department of Correction
Public Access Information System

Instructions: Enter information and press button Search for Offender.
(Note: You must enter either the DOC Number or the first 2 characters of the last name. If you need search help, click here for Search Tips.)

DOC Number:  
(DOC Number overrides any other search criteria.)

Last Name:  

First Name:  

Middle Initial:  

Gender:  

Race:  

Do you want Sentence History information included in your results?  ○ Yes  ○ No
(Note: Including sentence history can significantly delay response times.)
Service Status: EXPIRED
Projected Release Date: 07/04/2001
Actual Release Date: 07/04/2001
Punishment Type: INTERMEDIATE SS
Sentence Type 1: DEPT OF CORR DIV OF PRISONS
Sentence Type 2: SPECIAL PROBATION (SPLIT)
Split Sentence Active Term: 3 MONTHS 1 DAY

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Docket#</th>
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<th>Offense Date</th>
<th>Type</th>
<th>Sentencing Penalty Class Code</th>
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<tbody>
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<td>00010821</td>
<td>MANUFACTURE SCHEDULE II (PRINCIPAL)</td>
<td>06/15/2000</td>
<td>FELON</td>
<td>CLASS H</td>
</tr>
</tbody>
</table>

Supervision Record for Sentence Number: 04-001

Commitment Type: PROBATION/PAROLE
Conviction Date: 04/02/2001
County of Conviction: ROCKINGHAM
Punishment Type: INTERMEDIATE SS
Sentence Type 1: PROBATION
Sentence Type 2: SUSPENDED SENTENCE
Sentence Type 3: DEPT OF CORR DIV OF PRISONS
Sentence Type 4: SPECIAL PROBATION (SPLIT)

<table>
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<th>Docket#</th>
<th>Offense (Qualifier)</th>
<th>Offense Date</th>
<th>Type</th>
<th>Sentencing Penalty Class Code</th>
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</thead>
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<td>CONCURRENT TO SENTENCE NUMBER 03-001</td>
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<td>SELL SCHEDULE II (PRINCIPAL)</td>
<td>06/15/2000</td>
<td>FELON</td>
<td>CLASS H</td>
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## Baseline Demographics (n=196)

<table>
<thead>
<tr>
<th></th>
<th>Mean/Percent</th>
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</thead>
<tbody>
<tr>
<td>Age, yrs</td>
<td>52 (25-85)</td>
</tr>
<tr>
<td>% Male</td>
<td>55</td>
</tr>
<tr>
<td>% White</td>
<td>75</td>
</tr>
<tr>
<td>% Finished High School</td>
<td>60</td>
</tr>
<tr>
<td>% Disabled</td>
<td>57</td>
</tr>
<tr>
<td>% Income &lt;$20,000</td>
<td>85</td>
</tr>
<tr>
<td>% Medicaid/Medicare</td>
<td>62</td>
</tr>
<tr>
<td>% Uninsured</td>
<td>30</td>
</tr>
</tbody>
</table>
## Baseline Characteristics

<table>
<thead>
<tr>
<th></th>
<th>% Smoker</th>
<th>% ETOH</th>
<th>% Receiving Benzodiazepines</th>
<th>% H/O Cocaine Use</th>
<th>% Receiving Opioids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>% Smoker</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>57</td>
<td>19</td>
<td></td>
<td>28</td>
<td>96</td>
</tr>
<tr>
<td>Ever</td>
<td>84</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% ETOH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>19</td>
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<tr>
<td>Ever</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Abuse</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% Receiving Benzodiazepines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% H/O Cocaine Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% Receiving Opioids</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>96</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Baseline Characteristics

<table>
<thead>
<tr>
<th>CESD Depression Score</th>
<th>23.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Depressed (CESD $\leq$ 15)</td>
<td>74</td>
</tr>
<tr>
<td>% Severe Depression (CESD $\leq$ 22)</td>
<td>54</td>
</tr>
<tr>
<td>% State Drug Conviction</td>
<td>12</td>
</tr>
<tr>
<td>% DUI</td>
<td>11</td>
</tr>
<tr>
<td>% Drug or DUI</td>
<td>20</td>
</tr>
<tr>
<td>% Multiple Drug Convictions</td>
<td>4</td>
</tr>
</tbody>
</table>
## Primary Pain Types (n=196)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbar Spine</td>
<td>41</td>
</tr>
<tr>
<td>Cervical &amp; Thoracic Spine</td>
<td>11</td>
</tr>
<tr>
<td>Fibromyalgia/Myofascial</td>
<td>11</td>
</tr>
<tr>
<td>Knee &amp; Hip</td>
<td>12</td>
</tr>
<tr>
<td>Elbow &amp; Shoulder</td>
<td>3</td>
</tr>
<tr>
<td>Polyarticular Arthritis</td>
<td>5</td>
</tr>
<tr>
<td>Abdomen</td>
<td>4</td>
</tr>
<tr>
<td>Neuropathic Pain</td>
<td>5</td>
</tr>
<tr>
<td>Headache</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
</tr>
</tbody>
</table>
# 3 Month Results: Disability & Depression

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>3 Months</th>
<th>Δ</th>
<th>P-Value</th>
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</thead>
<tbody>
<tr>
<td>PDI</td>
<td>47</td>
<td>39</td>
<td>16%</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>CESD20</td>
<td>24</td>
<td>18</td>
<td>25%</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>% Depressed</td>
<td>79</td>
<td>54</td>
<td>32%</td>
<td>0.003†</td>
</tr>
<tr>
<td>% Rx</td>
<td>44</td>
<td>52</td>
<td>15%</td>
<td>0.059†</td>
</tr>
</tbody>
</table>

*Paired ttest

†McNemar’s test
Serious Substance Misuse/Abuse

- 62 of 196 (32%)

<table>
<thead>
<tr>
<th>Substance Misuse</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulants in Urine</td>
<td>62</td>
</tr>
<tr>
<td>Cocaine</td>
<td>25</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>23</td>
</tr>
<tr>
<td>Diversion</td>
<td>2</td>
</tr>
<tr>
<td>Doctor Collecting</td>
<td>10</td>
</tr>
<tr>
<td>Inconsistent Urines</td>
<td>9</td>
</tr>
<tr>
<td>Negative Urines (“Clean Urine”)</td>
<td>15</td>
</tr>
<tr>
<td>Prescription Fraud</td>
<td>2</td>
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</tbody>
</table>
## Substance Misuse: Bivariate Analysis

<table>
<thead>
<tr>
<th></th>
<th>Non-Misusers</th>
<th>Misusers</th>
<th>RR (95% CI)/ P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, yrs</strong></td>
<td>54</td>
<td>48</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>% Male</strong></td>
<td>38</td>
<td>60</td>
<td>1.56 (1.16-2.11)</td>
</tr>
<tr>
<td><strong>% White</strong></td>
<td>77</td>
<td>71</td>
<td>0.73 (0.36-1.55)</td>
</tr>
<tr>
<td><strong>% HS Graduate</strong></td>
<td>59</td>
<td>64</td>
<td>1.09 (0.86-1.38)</td>
</tr>
<tr>
<td><strong>% Income &lt;20k/yr</strong></td>
<td>15</td>
<td>14</td>
<td>0.96 (0.44-2.07)</td>
</tr>
<tr>
<td><strong>% Uninsured</strong></td>
<td>25</td>
<td>39</td>
<td>1.53 (0.99-2.34)</td>
</tr>
<tr>
<td><strong>REALM&lt; Score</strong></td>
<td>51</td>
<td>54</td>
<td>0.492</td>
</tr>
<tr>
<td><strong>CESD</strong></td>
<td>23</td>
<td>26</td>
<td>0.080</td>
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</table>
## Substance Misuse: Bivariate Analysis

<table>
<thead>
<tr>
<th>Non-Misusers</th>
<th>Misusers</th>
<th>RR (95% CI)/P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Disability</td>
<td>60</td>
<td>51</td>
</tr>
<tr>
<td>% H/O ETOH Abuse</td>
<td>23</td>
<td>44</td>
</tr>
<tr>
<td>% Receiving Benzos</td>
<td>33</td>
<td>46</td>
</tr>
<tr>
<td>% H/O Cocaine Use</td>
<td>21</td>
<td>68</td>
</tr>
<tr>
<td>% Positive Urine Cannabis</td>
<td>12</td>
<td>33</td>
</tr>
</tbody>
</table>

### NC Criminal History
- **DUI**
  - Non-Misusers: 7
  - Misusers: 19
  - RR: 2.88 (1.28-6.48)
- **Drug**
  - Non-Misusers: 5
  - Misusers: 27
  - RR: 5.25 (2.30-12.00)
- **Multiple Drug**
  - Non-Misusers: 1
  - Misusers: 11
  - RR: 15.13 (1.9-120)
- **DUI or Drug**
  - Non-Misusers: 11
  - Misusers: 40
  - RR: 3.60 (2.05-6.34)
## Pain Scores & Substance Misuse

<table>
<thead>
<tr>
<th></th>
<th>Non-Misusers</th>
<th>Misusers</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst pain*</td>
<td>9.2</td>
<td>9.2</td>
<td>0.920</td>
</tr>
<tr>
<td>Least pain</td>
<td>4.3</td>
<td>4.5</td>
<td>0.536</td>
</tr>
<tr>
<td>Average pain</td>
<td>6.5</td>
<td>6.6</td>
<td>0.569</td>
</tr>
<tr>
<td>Current pain</td>
<td>6.3</td>
<td>7.2</td>
<td>0.021</td>
</tr>
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</table>
# Multivariate Predictors of Substance Misuse

<table>
<thead>
<tr>
<th>Model</th>
<th>Odds Ratio (95% CI)</th>
<th>AUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.95 (0.90-0.99)</td>
<td></td>
</tr>
<tr>
<td>Drug or DUI Conviction</td>
<td>2.58 (1.01-6.59)</td>
<td></td>
</tr>
<tr>
<td>H/O Cocaine Use</td>
<td>4.30 (1.76-10.4)</td>
<td></td>
</tr>
<tr>
<td>H/O ETOH Abuse</td>
<td>2.60 (1.12-6.26)</td>
<td>0.827</td>
</tr>
</tbody>
</table>
Multivariate Analysis

Area under ROC curve = 0.8273
Mental Illness Management

Depression
- Intensify pharmacologic therapy
- Encourage psych follow-up

Personality Disorders/Bipolar/Psychosis
- Not formally assessed and quantified as part of program but large recognized burden
- Insist on psychiatric follow-up
Substance Misuse Management

- Substance abuse/misuse not a monolithic concept: psychiatric and/or criminal dimensions
- Opioids discontinued and reconsidered after six months if counseling received
- All misusers referred for counseling but only two followed-through
Conclusions

• Psychiatric comorbidity was common in patients with chronic pain
• DSM offers an inherently educational framework
• Depression amenable to primary care interventions
• Past cocaine use, a criminal drug or alcohol history, current marijuana use may predict substance misuse
• Substance misuse treatment is problematic
The Crisis in Mental Health

• President’s New Freedom Commission on Mental Health: “system in shambles”
• Mental illness and alcohol and drug use disorders lead all causes of disability
• Mandate for reform without resources
• Substance-abuse disorders not addressed
The Internist’s Role

• What is the internists role in ensuring that their patients with chronic pain receive comprehensive care?
• How do we address the complex mental health needs of our patients in an under-resourced environment?
Challenges in a Teaching Setting

Jaishree Hariharan, MD
Assistant Professor of Medicine
The first clue was the thick chart. I knew I wouldn’t have enough time to review it so I just went in and introduced myself. I told her that I was going to be her doctor for the next 3 years, and she said that she was glad that she had a new doctor because her last one did nothing for her. She was the only patient I ever had who said she didn’t like my attending. That was another clue. After the introductions, she proceeded to direct me on what I needed to do for her. She had post-polio syndrome and chronic pain which had been evaluated fully and was all documented in the chart. Never mind her diabetes. That was well controlled, and she didn’t want to discuss it. She needed her pain medications which had to be prescribed in a certain manner so that she wouldn’t have any trouble with the pharmacy. She was also having trouble for the past year in getting her electric wheelchair repaired and having her bathroom remodeled, so that it was wheelchair accessible. Her last resident was supposedly trying for a year to help get this arranged, but nothing was achieved.
After discussing the case with my attending, he gave me a little background information about her chronic pain and that she was eventually diagnosed with post-polio syndrome. Because the insurance did not believe that it was an actual disease, they were not willing to cover her wheelchair repair or bathroom remodeling expenses. He then helped me out with the prescriptions and made a brief stop to the exam room for a quick greeting. It was about 3 months into internship, and I was still trying to figure out how the clinic ran. She then said that I needed to arrange for monthly appointments with her so that I could get to learn about her and her health history better. Right then it hit me…I was in trouble. Throughout intern year, I would feel a sense of dread any time she was on my schedule or receive a call about her. I felt helpless in trying to help her, and I wished for more guidance, but wasn’t receiving any from my Attending. Maybe it was because he didn’t know what else to do with her either.
Her following visits continued in the same fashion as her first. She would govern what I should try to do to help control her pain. She never talked about her diabetes. She would cry how she would need to visit the ER multiple times for IV pain meds because the pain would become unbearable. We adjusted her pain medication. She went to visit neurosurgery again. She even got a second opinion in Marshfield. Her pain continues to plague her. After 2 years, the only thing I accomplished was getting her wheelchair fixed and her bathroom remodeled.
What challenges does this case display?
What additional challenges do you face?
Challenges
(as derived from group discussion)

• Poor prognosis
• Patient dissatisfaction
• Doctor dissatisfaction
• Not enough support
• Faculty not prepared
• Personality disorder
• Resident affect
• Very complex (too hard for residents)
• Full of psychological issues (ill-prepared to address)
• Lack practice guidelines/protocols
• Discontinuity
• Trust between doctor and patient
How can we address these?
Solutions
(as derived from group discussion)

- Chronic disease treatment model
- Prepare resident for “reassign” patient
- Clarify resident’s role
- Redefine success (state goals as outcomes)
- Focus: caring not curing
- Direct toward “support services”
- Assess patients’ needs/desires
- Frequent f/u (or team w/other providers)
- Partner with support services
- Pair resident/attending
- Develop curriculum for residents/faculty
- Address resident affect (early/often)
Challenges in a Teaching Setting

- Burden
- Barriers
- Solutions
The Burden of Chronic Pain

• One of the most challenging and prevalent problems in Primary care
• Utilizes enormous medical and social resources
• Chronic pain can dramatically affect quality of life.
Barriers to Effective Pain Management in an Academic Setting

- Physician barriers
- Patient related barriers
- System barriers
- Teaching challenges
Physician Barriers

- Gaps in knowledge
- Widely variable prescribing behaviors
- Lack of training in medical schools and residency training programs
- Fear of regulatory sanctions
Patient Related Barriers

- Communication
- Psychosocial factors
- Co-morbid conditions
- Patient attitude / behavior
- Substance abuse
System Barriers

*Health Care System*

- Cost of prescription drugs
- Changes in reimbursement policies
- Pharmaceutical industry influences
- Lack of support systems
System Barriers cont’d

*Limitations of continuity*

- Multiple providers
  - Trainees
  - Faculty
- Resident turnover
- Only one clinic session per week
- Teaching clinic can be chaotic
- ACGME Guidelines
Teaching Challenges Residents

- No formal / standard curriculum
- Marked variability in resident learning experience
- Training depends on:
  - Ambulatory experience
  - Preceptor attitudes and clinical experience
  - Differences in inpatient and outpatient practices
- “Dreaded” reassigns
Teaching Challenges
Faculty

• Limited time to precept
• Large amount of material to be covered
• Balance patient care, resident attitudes and challenging cases
• Multiple responsibilities
• Need to be good themselves in order to teach
Patient Point of View

- Too many physicians
- “Nobody listens to me”
- “I just want my meds”
• Do we have a solution?

• Can we overcome these barriers?
Solutions

• Systems Improvement

• Education
Systems Improvement

• Assess need in your clinic
  - patient
  - clinician
  - staff
• Improve existing systems in place which impacts patient care
• Educate:
  - staff / physicians
  - patients
Medical College Experience

- Urban Academic Medical Center
  - 10 Faculty and 34 Internal Medicine Residents
  - 4 nurses, 6 medical assistants and 4 scheduling staff
- Payor mix: 2003 data
  - T18/T19 - 28%
  - Indigent - 38%
  - Commercial - 23%
  - HMO - 11%
Medical College Experience cont’d.  

In 2000 we created focus groups comprised of faculty, staff, and resident representatives as part of overall quality improvement process.
Medical College Experience

Findings of the Group

• Multiple phone calls requesting meds
• Walk-ins requesting refills “now”
• Poor documentation
• Multiple clinic visits, urgent care visits
• Clinic not prepared or structured to handle these problems
Consequences

- Multiple patient complaints
- Low staff morale
- Clinic efficiency very low
- Staff turnover
- *Unhappy residents*
Plan of Action

- Instituted a “contract” based approach for all patients started on long-acting opioid for non-cancer pain (2000)
- Regular meetings and reminders given to physicians and staff.
- Incoming faculty and residents oriented on plan and opioid guidelines
- Created a database of all patients on medication contract
- Created an appointment system for medication pick-up (2003)
10 Point Opioid Guideline

- Opioid therapy to be considered after all reasonable attempts at analgesia have failed.
- Use of opioids must improve rather than reinforce pain behavior.
- Psychosocial factors must be actively sought and managed.
- Patient should give informed consent (e.g. Contract)
- Long acting opioids should be used and titrated to optimum pain relief.
10 Point Opioid Guideline cont’d

- Adjuvant medications used concurrently.
- Single physician to take primary responsibility.
- Aberrant behaviors, uncontrolled drug use, seeking drugs from other providers must be assessed and strict guidelines enforced.
- Monitor patients regularly for response, function and side effects.
- Documentation is essential.
195 (3%) patients on contract for chronic pain
LBP – most common diagnosis (40%)
83% of patients adhered to contract
Contract became the preferred method of managing patients on opioids
Oxycontin & Oxycodone/APAP most commonly prescribed drugs
Physician prescribing behaviors vary widely
Medical College Experience

Benefits of Contract

- Upfront communication
- Standardized documentation
- Facilitates a mutually agreed course of action
- Improves clinic efficiency and work flow with multiple providers
- Accountability on the part of patient and physician
Appointment System

- A schedule was created, on the IDX appointment system, specifically for contract med pick-up during regular clinic hours.
- The patients were told to make a scheduled appointment for prescription pick-up 28 days from last pick-up date and also to make a physician visit in 3 months.
- Nursing staff facilitate the process and the patients pick up their prescription(s) at the scheduled appointment.
Preference of Appointment System

1st 6 mo Agree Improvement

Patients N=35

Staff N=16
Patient Satisfaction Survey

- Prescription received on due date: N = 35
- Process for requesting meds
- Work Flow and Efficiency: N = 16

6 month follow up
Key Lessons Learned

Improving systems can play a major role in patient care by:

- Improving clinic efficiency
- Improving patient satisfaction
- Standardized documentation
- Enhance compliance
Goals for Education

• Develop a Comprehensive curriculum
• Empower residents with tools necessary to make informed decisions
• Address comfort level, confidence, and provide ongoing guidance in management
Future

- Teach medical students about chronic pain utilizing Web-based curriculum in the M3 & M4 clerkships
- Pharm-D’s to assist in drug management
- Implement a Standardized Drug Protocol which is cost-effective, efficacious and manageable
A Pain Curriculum

A necessity and a requirement
Curriculum Development

• Usual process
  – Needs assessment, objectives, content, settings, evaluation, refine

• Consider precourse elements

• Bolus and Drip

• Faculty Development
At Baystate/Tufts

• Medical Education Workshop
• PGY1 Orientation
• Lectures
• Small group conferences
• Monthly review
  – Multidisciplinary rounds
  – Systems-based Practice