

Behavioral Factors Influencing the Transition From Acute to Chronic Pain: Implications for Long-Term Opioid Use

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It is more important to know
which *person* has a disease
than to know which *disease*
the person has.

- Sir William Osler (1849-1919)

The Epidemiology of Pain

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80% of all MD visits include the *complaint* of pain

Turk & Gatchel 1996

Over 1/3 of Primary Care visits are for the *primary* complaint of pain

Upshur et al. 2010

Up to 50% of US adults have pain *at any time*

Gatchel et al. 2007; Elliott et al 1999; Walker 2000

Psychosocial factors strongly contribute to pain onset, severity, chronicity and disability

Van Dorsten & Weisberg (2011), Van Dorsten 2018

Most expensive 20% of patients account for 88% of all healthcare costs

Ashe et al. 2001

The Chronic Nature of Patients With Pain: Why?

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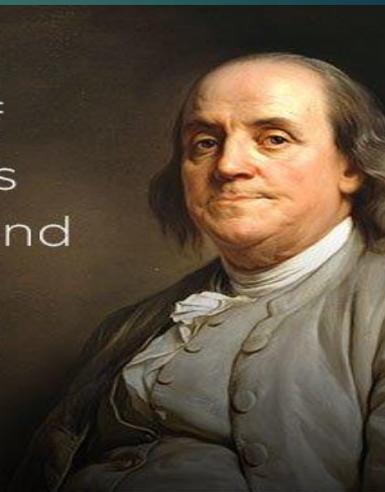
- 379 neuropathic pain patients referred for first evaluation at a German pain clinic.
 - 8 MDs for 10 years prior to referral Strumpf et al. 1993
- 134 CRPS patients – initial evaluation: US Pain Clinic
 - 5 MDs for 30 months prior to referral Allen et al. 1999
- 77 pain patients – first referral to NZ Pain Clinic
 - 6 yrs, intensity 7.9 at referral time Petrie et al. 2005
- TMD/face pain patients referred to US face pain clinic
 - 3.2 MDs for 34 months prior to referral Glaros et al. 1995

Today's Talking Points

- ▶ In light of the current challenges to successfully manage chronic pain, and the challenges in preventing and/or treating opioid addiction, isn't there something we could do to better clinically recognize the patients at potential risk for non-successful medical treatment, chronic pain and/or long-term opioid use?
 - ▶ Factors which best predict pain/medical treatment failure
 - ▶ Factors which are associated with a transition from acute to the development of chronic pain
 - ▶ Factors associated with diffuse and chronic health complaints which minimally respond to medical treatment (somatization)
 - ▶ Factors which may be associated with or predict opioid misuse

An ounce of prevention is worth a pound of cure.

- Benjamin Franklin



Psychosocial Factors Affecting Medical Treatment/Surgical Outcome

- ▶ Mood (Anxiety, Depression)
- ▶ Somatization
- ▶ Unrealistic Treatment Expectations
- ▶ Passive Coping / Catastrophizing
- ▶ Social Reinforcement of Pain Behavior/Disability
- ▶ Activity Restriction/Fear Avoidance of Activity
- ▶ Work-Relevant Factors (Job Dissatisfaction, Heavy Job Demands, WKCP)
- ▶ Low Education
- ▶ High Levels of Pre-Procedural Pain

Van Dorsten 2018; Block et al. 2014, Den Boer et al. 2006, Harris et al. 2005, Block 2013

Most Common Behavioral Referral Criteria

- Symptoms inconsistent with identifiable medical pathology ***
- High levels of mood or psychiatric distress ***
- History of psychiatric/psychological treatment
- Sleep disturbance (insomnia or hypersomnia)
- Excessively high or low treatment expectations***
- Marital distress or lack of social support***
- Negative work attitudes/dissatisfaction

Block et al. 2013, Van Dorsten 2006

Most Common Behavioral Referral Criteria

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- Excessive disability from pain > 3 months
 - Prolonged "activity intolerance" after injury
 - Excessive reclining (>15+ hours)
 - Subjective disability; "Fear Avoidance" of Activity
 - "Catastrophizing" regarding recovery
 - Negative outcomes with all treatments attempted
 - High dose opioids and/or anxiolytics/benzos
 - Litigation or secondary gain benefits s/p injury
 - History of non-adherence with treatment
 - Persistent maladaptive coping efforts
- Block et al. 2013, Van Dorsten 2006

Psychosocial Factors Associated With Transition from Acute to Chronic Pain

- ▶ Depression/Anxiety
- ▶ Somatization
- ▶ Chronic Distress in Daily Life
- ▶ Passive Coping / Catastrophizing
- ▶ Fear Avoidance of Activity
- ▶ Several Cumulative Traumatic Life Events
- ▶ Early Belief That Pain Would Be Permanent
- ▶ Work-Relevant Factors (Job Dissatisfaction, Heavy Job Demands, WKCP)
- ▶ Negative Expectations for Recovery
- ▶ Perception of Multiple Lifestyle Changes Secondary to Pain

Apkarian et al. 2013; Shipton 2011; Casey et al. 2008; Pincus et al. 2002;
Hassenbring et al. 2001

Somatization and Somatoform Disorders

- ▶ Commonly referred to as *Medically Unexplained Symptoms* – diffuse physical symptoms for which there are no confirmatory biological, pathological or physical findings Nezu et al. 2001
- ▶ Constitute a prevalence of 10-25% of ALL primary care visits with healthcare costs exceeding \$100 billion annually Gureje 1997; Ormel 1994; Spitzer 1994; Barsky 2005
- ▶ Strong association with mood disorders, over 50% have a co-morbid DSM-V diagnosis Allen et al. 2001; Simon & Von Korff 1991
- ▶ Over two times the annual cost of non-somatizing patients; Lifetime healthcare costs 6-14 times the US average Barsky 2005; Smith et al. 1986
- ▶ Up to 25% of all physician visits are for physical complaints that lack a clear organic etiology Gureje 1997

Psychosocial Factors Associated With Somatization – High Medical Utilization

- ▶ Low Social Support
 - ▶ Chronic Distress in Life – Acute Daily Stressors (increase up to 50%)
 - ▶ Multiple Unexplained Pain Complaints with Inconsistent Findings
 - ▶ Depression/Anxiety
 - ▶ Passive Coping / Catastrophizing
 - ▶ Fear Avoidance of Activity
 - ▶ More Cumulative Traumatic Life Events
 - ▶ Pessimism/Negative Expectations for Recovery
 - ▶ Perception of Multiple Lifestyle Changes Secondary to Health
- Gaynes 2007; Katon 2001; Bair et al. 2003; Gureje et al. 2008; Woolfork & Allen 2007

Mood and Medical/Pain Complaints

Patients presenting to physician with **two** diffuse pain complaints / minimal findings – a **6x** probability that the complaints are mood/depression related

Patients presenting to medical provider with **three** or more diffuse pain complaints / minimal findings – an **8x** probability that the complaints are mood/depression related

Katz & Sullivan (1990)

Depression and Medical Treatment Outcome

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Depression

- Prevalence among Medical Patients
 - 5-40% in primary care Coyne 2002; Niles 2005, Gaynes 2007
 - 30-40+% among patients with pain Turner 1984
 - ~50% Gatchel & Young (2005) preliminary data of patients with pain disorders
- A common condition that merits at least initial evaluation in patients with pain

Anxiety and Medical Treatment Outcome

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Anxiety

- Prevalence Among Medical Patients
 - 49% Primary Care, 52% Specialty Clinics
 - Social phobia, GAD, PTSD Gaynes et al. 2007
 - 40-50% preliminary data of pain patients Gatchel & Young 2005, Reid et al. 2002
- A common condition that merits at least initial evaluation in patients with pain

Influence of Mood on Medical Treatment Outcome

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Depression and Anxiety Disorders

INCREASED:

- Health care utilization, MD/ER visits
- Medication use (3-6 fold increase in opioid prescriptions) Reid et al. 2002; Sullivan et al. 2005
- More likely to be written an opioid than anti-depressant
- Premature treatment drop-out, relapse after treatment
- Sedentary activity, alcohol/drug use
- Number of health and pain complaints
- Pain severity
- Post-operative pain
- Duration of pain
- Functional limitation and disability

Adapted from Van Dorsten & Weisberg 2011, Van Dorsten 2018

Influence of Mood on Medical Treatment Outcome

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Depression and Anxiety Disorders

DECREASED:

- Return to work
- Adherence with treatment recommendations
 - 1.79-3.0 odds ratio of poor adherence
Grenard et al. 2011, DeMatteo et al. 2002, Gonzales et al. 2008
- Overall rehabilitative outcome
- ~50% retention of information provided

Adapted from Van Dorsten & Weisberg 2011, Van Dorsten 2018

Psychosocial Factors Associated With Chronic Opioid Use or Misuse

- ▶ Depression/Anxiety Disorder (Panic, Social Anxiety, Agoraphobia)
- ▶ Somatization
- ▶ Multiple Pain Complaints
- ▶ Chronic Distress in Daily Life – Acute Daily Stressors
- ▶ Greater Levels of Subjective Disability
- ▶ Low Rated Health Status
- ▶ Low Educational Level

Seghal et al. 2012; Hojsted et al. 2010; Manchikanti et al. 2007

Prescription Medication Abuse Overuse or Illicit Drug Use

- ▶ Drug Abuse: 18-41% of CPP receiving opioids
- ▶ Illicit Drug Use in CPP: 14-16% in those without controlled substance prescriptions; 34% in those with controlled substance prescriptions
- ▶ Estimated Prevalence of ANY Drug Overuse, Abuse, or Divergence > 40% in CPP

Christo et al. 2011; Havens et al. 2007; Hoffman et al. 1995; Manchikanti et al. 2003; 2004; 2005; 2006; National Institute on Drug Abuse 2004; Pesce et al. 2010; SAHMSA 2009

Who's Most Likely to Be Written Opioids for Pain?

- ▶ Females
- ▶ Multiple pain complaints (3-4 or more)*
- ▶ High Medical Co-Morbidity
- ▶ High Psychiatric Co-Morbidity*
- ▶ Highest Demonstration of Clinical Distress*
- ▶ Mood Disorder*

Sullivan 2010 ; Morasco et al. 2010

Who's Most Likely to Misuse?

- ▶ Evidence is “moderate” at best
- ▶ No single approach/strategy shown best
- ▶ Initial evidence suggests:
 - ▶ Males
 - ▶ Younger age
 - ▶ History of Drug/ETOH misuse/arrests*
 - ▶ Mood Disorder*
 - ▶ Baseline/Treatment UDT problems*

Turk et al. 2008

Other Clinical Peculiarities

- ▶ Most likely to be written opioids? Highest distress
- ▶ Most likely to remain on chronic opioids?
 - ▶ Those on highest doses – 120 mg equivalence
 - ▶ Those initially using opioids for >90 days! (67% remain)
- ▶ Are prescribers more vigilant with this group?
 - ▶ NO differences in UDT testing, use of long v short-acting opioids, use of other therapies, early refills, more frequent office visits

Martin et al. 2010

Morasco et al. 2010; Starrels et al. 2010

Aberrant Drug-Related Behaviors

- More Predictive of Addiction/Diversion
 - Selling prescription drugs
 - Lost/Stolen scripts
 - Prescription forgery
 - Stealing/borrowing drugs from others
 - Obtaining prescription drugs for non-medical sources
 - Concurrent abuse of illicit drugs
 - Multiple unsanctioned dose escalations

Passik and Portenoy 1998

Behavior Monitoring Plus Urine Toxicology Testing

- ▶ Katz et al. 2003
 - ▶ 122 patients maintained on chronic opioid therapy for three years by two physicians
 - ▶ Urine toxicology screening at each visit at one site; at least once annually at the other
 - ▶ "positive urine toxicology" if illicit drug, non-prescribed controlled drug, or ethanol
 - ▶ "aberrant behaviors": lost/stolen scripts, excessive consumption beyond dosages, visits without appointments for medication, multiple drug intolerance/ allergies, frequent telephone calls

Behavior Monitoring Plus Urine Toxicology Testing

- Results
 - 43% demonstrated "problems" on screening associated with drugs
 - 22% with behavioral "issues"
 - 29% has positive urine drug screen
 - *Despite signing a opioid contract agreement for screening
 - 21% demonstrated urine tox screen problem only
 - Would have missed 32% of patients with problem
 - 14% demonstrated aberrant behavior problem only
 - Would have missed 49% of patients with problem
- Most accurate and sensitive when used in combination

Resources to Assist Physicians in Providing Safe and Objective Opioid Treatment

What resources/tools are available to assist physicians in maintaining an "evidence based" practice approach?

- ▶ Urine Drug Screening (best available gold standard)
- ▶ Prescription Monitoring Program (objective measure)
- ▶ Aberrant Behavior Documentation (most available)
- ▶ Opioid Treatment Agreements (recommended)
- ▶ Paper and Pencil Screens (recommended)
- ▶ NO RECOMMENDATION FOR MOOD ASSESSMENT OR BEHAVIORAL MANAGEMENT OF RISK FACTORS IN MOST "EXPERT" GUIDELINES

Paper and Pencil “Screens”

- Many exist with little identification of “best.” See Passik et al. 2008 for comprehensive review of 24 potential tools
 - **Opioid Reporting Tool** Webster 2005
 - 5 Items scored to criterion number
 - Considers family/personal history of substance abuse, age, history of sexual abuse, psychological disease
 - **Screener & Opioid Assessment for Patients in Pain (SOAPP-R)** Butler et al. 2008
 - 24 Items, Scored 0-4, Criterion score of 18
 - Self-report questionnaire designed to predict aberrant medication-related behaviors among patients being considered for long-term opioid therapy.

Potential Documentation Topics

- ▶ Initial evaluation notes/baseline
 - ▶ Baseline **PDMP, paper and pencil inventory** result
 - ▶ Opioid **agreement, consent** for urine testing
 - ▶ **Comprehensive assessment of psychosocial/mood factors (???)**
 - ▶ “Relative risk” based upon current information
- ▶ Pain diagnosis, opioid use history, treatment plan
 - ▶ Current opioid, medication use; alcohol/marijuana use
 - ▶ History of non-prescription drug use, substance abuse
 - ▶ **Serial documentation of pain and function improvements**
 - ▶ Adverse side effects with opioids

Summary

- Vastly increasing numbers of patients with pain
- Vastly increasing problem of high volume prescription, opioid misuse, addiction, overdose
- Multiple psychosocial risk factors associated with chronic issues, treatment failure and potential opioid misuse
- Strongly recommend behavioral consultation and co-management at earliest time period for patients exhibiting a subset of the risks discussed
- Clinical treatment guidelines and opioid risk reduction strategies remain greatly under-utilized in clinical practice
2010; Starrels et al. 2011 Bair & Krebs

Summary

- Aberrant behaviors very common in most patient populations (chronic pain, cancer, AIDS)
- Providers must utilize combination of available tools to increase confidence in patient veracity
- Thorough documentation, urine screening, PMP review and behavioral monitoring should be used with paper-and-pencil screens **and potential behavioral assessments** where desired



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