



# Psychological Considerations in Care for Patients with Chronic Pain

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# Crossroads in Pain Care

- Clinical evidence-based care
- Provider ethics and boundaries of care
- Interdisciplinary trends in many surrounding disciplines, can inform this discussion
- Consider context
  - Larger perspective informing decision-making
  - Closer examination of data guiding decisions to date



# Provider's perspective

- Clinical psychologist with 20 years' experience
- Health psychology specialty, but emerging field
  - Gradual integration in care
  - Emerging role in policy, practice
- Provider's role: Integrating services at IU Health
  - North, in coordination with other specialties
  - Current model for pain practice with UH
  - No financial conflicts of interest beyond faculty position providing services, program administration

# Objectives



- Identify factors contributing to complexity of patients with chronic pain
  - Mental health context
  - Impact on physical health
  - Implications for integrated care approaches
  - Environment of ethics, legal considerations, social implications

# Objectives



- Understand components of psychological assessment, including awareness of risk factors for:
  - Patients
  - Providers
  - Other relevant parties
  - Understand their relevance to decision-making regarding advanced pain care

# Objectives



- Outline areas for future research related to suggested interdisciplinary model of care



# Context for Interdisciplinary Need

- Mental health needs in the US:
  - 25% of population, almost 50% in lifetime <sup>1</sup>
  - \$300B annual cost in US <sup>1</sup>
  - Developed nations: leading cause disability <sup>2</sup>
  - WHO: morbidity greater than homicide/war <sup>2</sup>
  - Medically unexplained vs. somatoform:
    - up to 50% of sx unexplained<sup>3</sup>

<sup>1</sup> Reeves et al., CDC, 2011  
<sup>2</sup> World Health Organization, 2004.  
<sup>3</sup> Kronke, 2003.



# Interdisciplinary Need

- Expensive for system: show up 2x as often <sup>1</sup>
- Disproportionate utilization and expense: <sup>2</sup>
  - 20.5% of PCP visits, but higher fx/\$:
  - ↑ Specialty visits (8.7 vs. 4.9)
  - ↑ ER visits (1.9 vs. 0.5)
  - ↑ Inpatient costs (\$3146 vs. \$991)
  - ↑ Outpatient costs (\$3208 vs. \$1771)

<sup>1</sup> Borus & Olendski, 1985

<sup>2</sup> Barsky et al, 2005.

# Interdisciplinary Need



- System cost:
  - Indirect costs of sx: workforce 1
    - 2-3x higher mental health cost vs. medical
      - Decreased productivity:
        - Anxiety: 88% (\$42.3B)
        - Depression: 62% (\$83.1B)
      - Days off work:
        - Mood d/o alone › chronic medical dz
        - \$50B in known costs: lost productivity
        - \$150B in undx, untx
  - Net: Huge, untreated problem

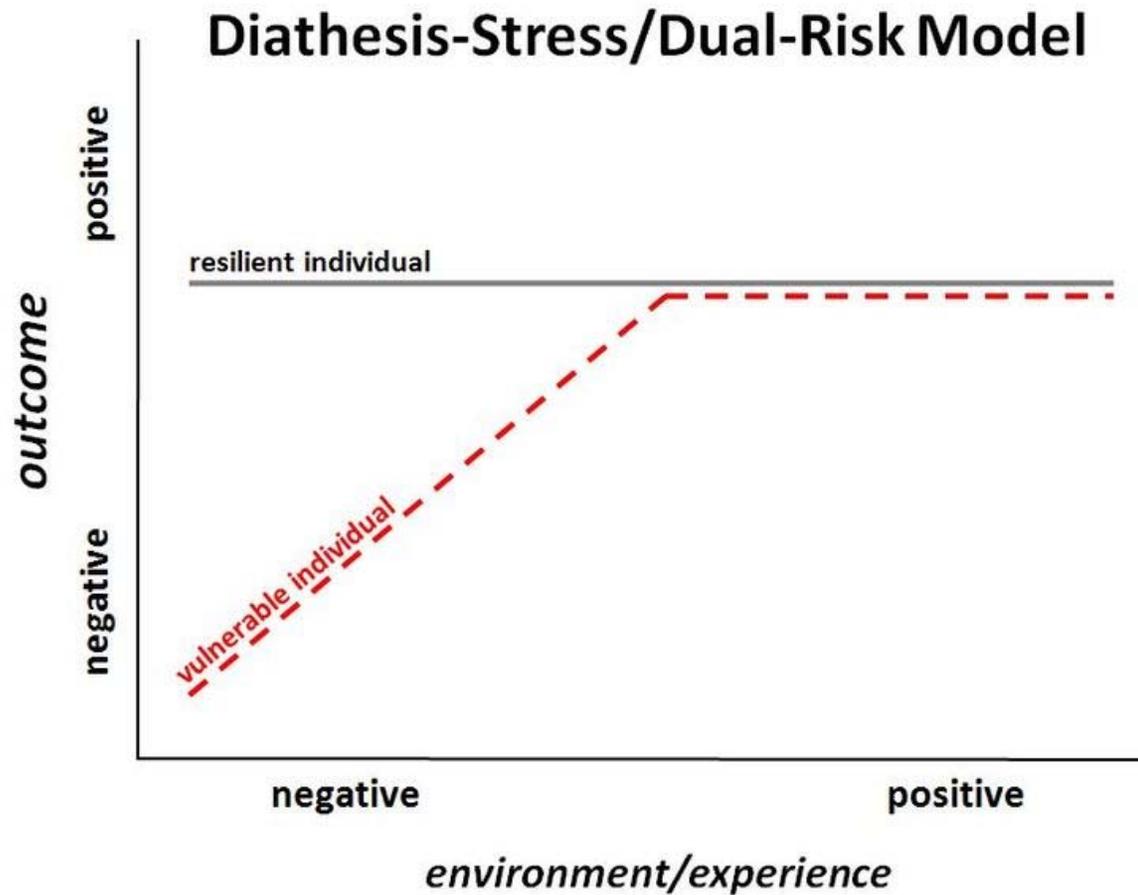
# Conceptual models



Biological  
substrates

Psychological  
substrates

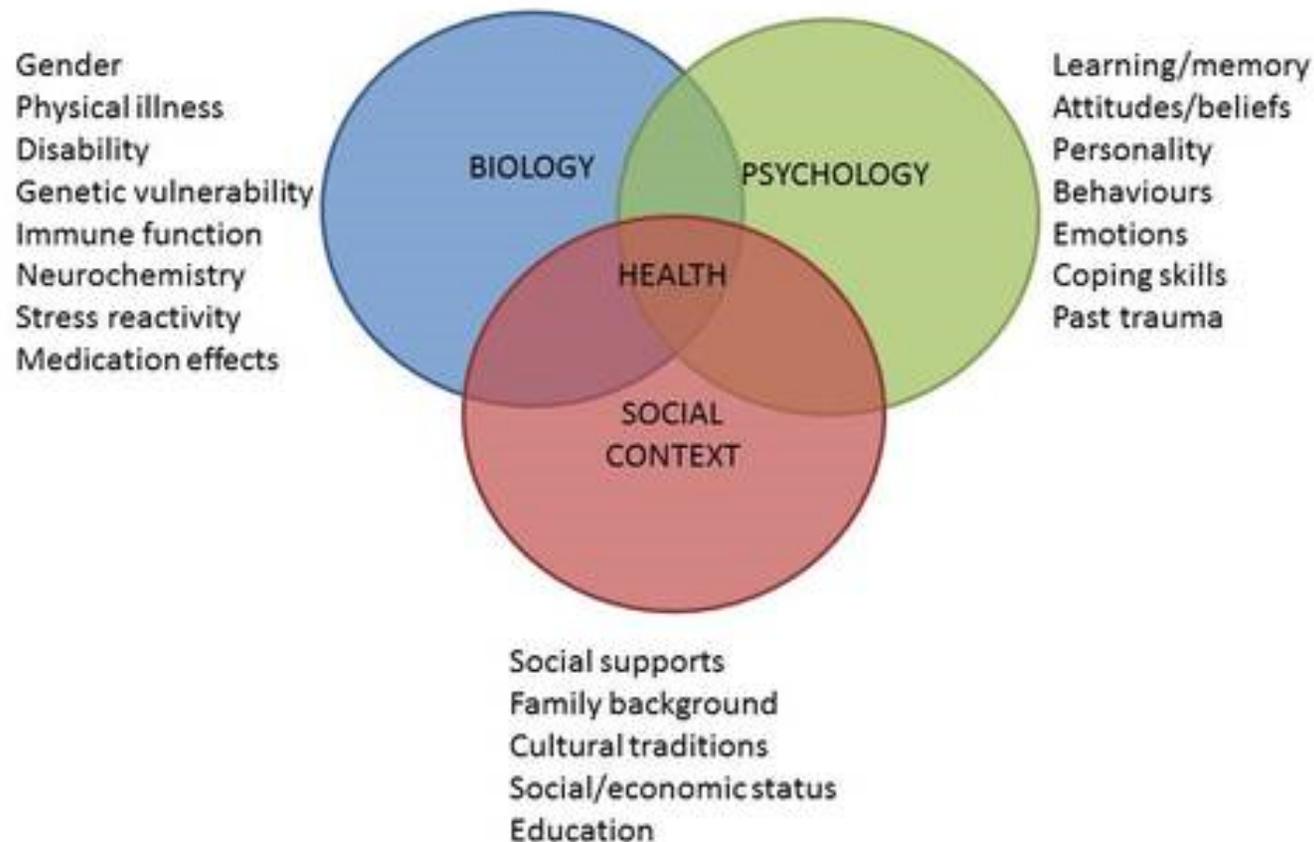
# Conceptual model



# Conceptual model



## BIOPSYCHOSOCIAL APPROACH TO UNDERSTANDING HEALTH





# Brain critical to sx perception

- Aware of physiological reactivity to stress
  - HPA axis: nano-seconds to 72h post-trauma 1
  - Minimally-discriminatory response: 1
    - Whether threat is near but not actual
    - Whether emotional or physical
    - Immune-mediated or palpable
- Enormous impact across system:
  - Immediate, chronic, and extinction-stage 2
  - Well-established risks assoc. with chronicity 1

1. Karren et al., 2014.

2. Selye. As cited in Maranto, 1984.



# Neuropsychological aspects of pain

Perception impacts outcome (as in all areas)

but \* in addition to medical contributors\*

- Both pain and fear activate the ACC, both directly influenced by emotion 1
- Both powerfully: Broken heart=physical injury 2
- Exacerbates pain perception 1
- Increased inflammatory response w both via cytokines, and can further alter brain processing of pain signals 3

1. Karren et al., 2014.
2. Eisenberger et al., 2003.
3. Maletic & Raison, 2012.

# Psychological factors in pain perception



- “Mind-body” treatment for chronic pain helpful in reducing: 1
  - Emotional symptoms
    - Depression
    - Anxiety
    - Hostility/anger
  - Physical symptoms
  - Medical care utilization/cost
    - -36% clinic use in 12 mos., down thereafter
    - Savings 2x by y2

1. Caudill et al., 1991.



# Psychological correlates

- Overlap with:
  - Mental health symptoms (e.g., 21%)
    - Brievik et al., 2006
  - Behavioral/coping problems
    - -opioid use disorder among 23.9% patients vs. 21.5 w risk mitigation intervention
      - Von Korff et al., 2017
- Vs. Presumption of misuse, e.g., :

Academic psychology is interested in this ‘pain perseverance paradox’. Understanding how and why self-defeating behaviour occurs is important and will give insight into the prevention of disability and distress. - Eccleston (2013).



# Perspective on opioid problems

- Risk of misuse per current published data (Kaye et al., 2017):
  - Misuse rates nationally range 2.5-2.8% US (12+)
  - Risk factors subject to psychological assessment
    - Content
    - Form (e.g., validity of report, r/o 2dary gain)
    - Requires complex coordination of care
    - Requires skill/training in specific assessment of health psych, malingering/factitious distinction
      - With substance use risk
      - Aberrant coping



# Role for health psychology

- Critical overlap with mental health presentation,
  - both given predisposing risk
  - and possible sequelae from chronic pain
- Also given behavioral misuse/coping risk
- And need for specialists with targeted training in psychiatric diagnosis (and care)
- Reasonable to consider psychological assessment to assist with decision-making



## Precedence in other disciplines: e.g.,:

- Oncology: routine recommendations of inclusion of psychological/psychosocial assessment and care
  - per national guidelines (NCCN) (ACCC)
- GI: routine recommendations with refractory, moderately-severe to severe, or where psychological factors are present
  - Per national guidelines (AGA, ACG)
- Women's health: recommended assessment and care as part of routine screening for mental health, incl depression (ACOG)

- WHO Steering Group on Pain Guidelines (2008):
  - "a recommendation about the steps which should be taken in a holistic assessment and documentation of pain, including assessment of cause, severity, activity and sleep disturbance, mood (anxiety, depression etc) and social impact"
    - Factors included in psychological evaluation
  - Interdisciplinary, psychological treatment also recommended
  - Reminder of:
    - “a recognition that patients often do not report pain – for a variety of reasons including religion, finance, fear, culture (see ref 2, annex 4)”
    - “a recognition that health workers often underestimate and under treat patients’ pain and the role of skilled listening by health workers”

# APS, AAPM guidelines (Chou et al, 2009)



- “Clinicians and regulators must jointly seek a balanced approach to opioid use, acknowledging the legitimate medical need for opioids in some patients with CNCP, while concurrently recognizing the serious public health problem of abuse...”
- “Proper patient selection is critical and requires a comprehensive benefit-to-harm evaluation that weighs the potential positive effects of opioids on pain and function against potential risks. Thorough risk assessment and stratification is appropriate in every case. “
- Recommend thorough assessment including:
  - Risk eval re: substance use/abuse risk
  - Psychopathology
  - “poorly defined pain conditions, likely somatoform disorder, or unresolved...”[secondary gain] “may predict poorer response”
  - Supplement with data: UDS, pill count, and prescription monitoring

# APS, AAPM guidelines (Chou et al, 2009)



- “In patients with a history of substance abuse or a psychiatric comorbidity, this may require assistance from persons with expertise in managing pain, addiction or other mental health concerns (see Section 6), and in some cases opioids may not be appropriate or should be deferred until the comorbidity has been adequately addressed”
- Psychologists are trained in assessment and treatment of exactly these domains:
  - Psychopathology
  - Substance use vs. abuse
  - Maladaptive coping
  - Other somatoform disorders (be careful to distinguish!)
  - Forthright reporting/validity detection

NB: Only one psychological professional included in panel for these guidelines

# APS, AAPM guidelines (Chou et al, 2009)



- Highest risk: repeated assessments when
  - Comorbid medical or psychiatric distress
  - History of substance abuse for pt/family
  - Occupational stress, high mental acuity required
- Screening tools recommended include:
  - Screener and Opioid Assessment for Patients with Pain (SOAPP 1.0)
  - Opioid Risk Tool (ORT)
  - Diagnosis, Intractability, Risk, Efficacy Tool (DIRE)
- Psychological evaluation also recommended for:
  - Depression, e.g., PHQ-9
  - Anxiety, e.g., GAD-7
  - Catastrophizing, e.g., PCS
  - If malingering concerns – malingering evaluation
  - If cognitive concerns: MMSE, then neuropsychological evaluation

# APS, AAPM guidelines (Chou et al, 2009)



- Treatment: More overtly inclusive of psychological care
- “When pain is accompanied by comorbidities, impaired function, or psychological disturbances, COT is likely to be most effective as part of multimodality treatment that addresses all of these domains.”
- CBT (cognitive-behavioral therapy, educationally-focused skill-building)
  - Interdisciplinary care supported as more effective 1
  - Specifically for application with chronic pain 2-6

1. Guzman et al.,2001.
2. Hoffman et al., 2007.
3. McCracken & Turk, 2007.
4. Morley et al. 1999.
5. Ostelo et al., 2005.
6. Van Tuller et al., 2000.



# CBT widely supported

- Most studied tx
- Efficient: 6-8 sessions
- Most efficacious, most lasting
- 15/18 RCT support superior CBT outcomes <sup>1</sup>
  - Pain:
    - CBT > no Δ paroxetine (targets anxiety) > no Δ SMC <sup>3</sup>
    - Only tx effective for fxal chest pain <sup>3</sup>
  - Composite bowel sx:
    - 67% (8wk CBT) vs. 31% (self-help support) vs. 10% <sup>2</sup>
    - Fully maintained at 3 mos. <sup>2</sup>

1 Palsson, 2012.

2 Green & Blanchard, 1994.

3 Fernandez et al., 1998.

# CDC Guidelines (2016)



- “Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient”
  - Doable but requires measuring:
    - pain (subjective)
    - functioning (more objective, still >self-report)
  - With awareness benefits should show reasonably early if likely at all (Kalso et al., 2007)
  - And in conjunction with nonpharmacological care, including mental health support

# CDC Guidelines



- LT evidence of efficacy insufficient, but does not appear negated, just not studied
  - In face of risks that are studied
  - Providers risk less attention to benefits
  - Especially among less screened population
    - Without inclusion of psychological testing

# CDC Guidelines

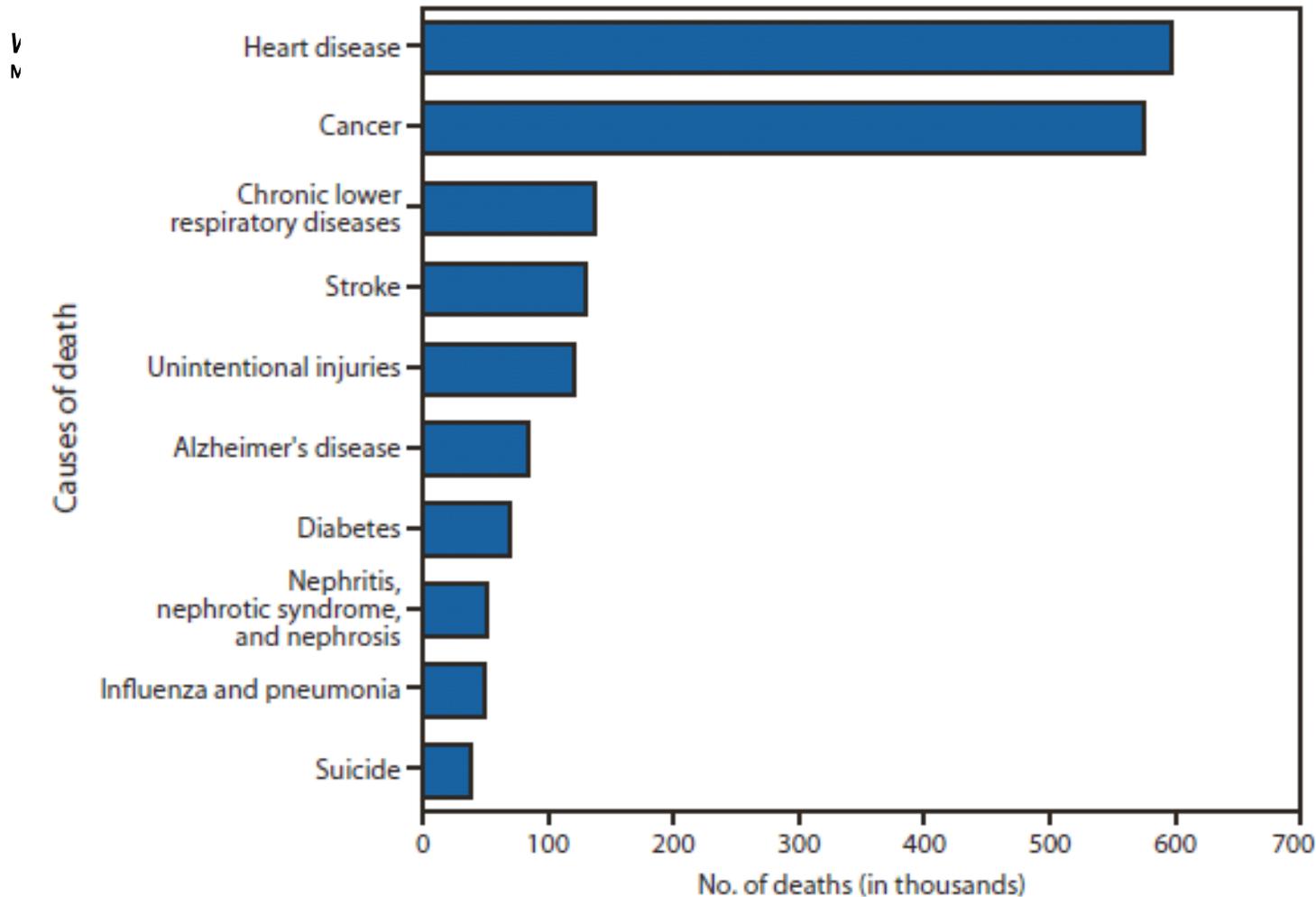


- Thus psychological assessment could facilitate
  - Better identification of patients at risk, for more appropriate care
  - Allow for more appropriate data gathering among patients within compliance guidelines
  - Incorporating appropriate measurement of full range of variables
    - Pain and impact on multiple areas of functioning
    - Psychological symptoms
    - Coping, catastrophizing
    - Compliance, HCP relations
    - Substance use



# Perspective on opioid problem

QuickStats: Number of Deaths from 10 Leading Causes — National Vital Statistics System, United States, 2010



- Murphy, Xu, Jochanek (2010) // [www.cdc.gov/nchs/data/dvs/deaths\\_20101\\_release.pdf](http://www.cdc.gov/nchs/data/dvs/deaths_20101_release.pdf)

# Big-picture



- Preventable deaths:
  - Tobacco-related mortality **480K/y** 1
    - Secondary smoke exposure **41K**
  - Top 5 preventable causes (cardiac dz, cancer, chr low resp dz, stroke, unint.injury): **900K** 2
  - Opioid-related deaths (2015): **~33K** 3
  - NB: Suicide: **>38K** 2

1. CDC, 2014.  
([https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/health\\_effects/tobacco\\_related\\_mortality/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.htm))
2. CDC, 2014 ([www.cdc.gov/media/releases/2014](http://www.cdc.gov/media/releases/2014))
3. CDC, 2016 ([www.cdc.gov/drugoverdose/data](http://www.cdc.gov/drugoverdose/data))

# Other risk concerns



Pictures from: New Yorker Cartoons



# Methodology concerns

- Minimal formal psychological inclusion in both:
  - Pre-treatment assessment, despite overt recommendation to include
    - Key for risk stratification
  - Ongoing co-treatment of pain and its implications, again despite overt recommendation
- In absence of greater data, timely decision-making needs, influenced by external pressures
  - Decision-making should be unbiased, data-based, and with balance of ethics and orientation to help with targeted/tailored approach



# Methodological concerns

- Insufficient evidence for any long-term effectiveness/results of opioid therapy (0 studies) in CDC guidelines (2016)
- Some increased health/misuse risk with use, but obviously not studied without use (CDC '16)
  - Insufficient control with existing mechanisms
- Scarce psychological factors inclusion
  - Patient selection
  - Variables measured
  - ?Harm without pain control?



# Recommendations

- Based on literature and CDC guidelines,
  - Partnered care between medical and psychological staff
  - Follow evidence-based guidelines for assessment of risk stratification
    - Psychopathology
    - Social support
    - Cognition/medical decision-making capacity
    - Coping, intrapersonal resources
    - Substance abuse risk
    - HCP relations
    - Compliance, forthrightness of report



# Psychological Assessment

- Screen for appropriateness of psych eval by first with medical staff:
  - Reviewing records for aberrant behaviors
  - Use INSPECT
  - UDS/other tox screen monitoring
  - Verify appropriate compliance and sufficiently cooperative HCP relations to facilitate successful care



# Psychological Assessment

- Diagnostic psychiatric evaluation
  - Structured or semi-structured if not deeply experienced in health psychology
  - Corroborating measures:
    - Depression: PHQ-9
    - Anxiety: GAD-7
    - Substance Use: SOAPP 1.0
    - Catastrophizing: Pain Catastrophizing Scale
    - Cognition: MMSE
    - If suspicion of malingering, further neuropsychological testing, and correlate with behaviors, consistency in report



# Coordinate Interdisciplinary Care

- Follow-up between medical and psychological providers:
  - Prior to initiation of advanced pain care
  - Periodically (e.g.,  $\psi$  q6-12m) to assure no major changes, sufficiency of care to needs (medical q3m) (CDC, 2016)
  - With aberrance in behavior or report
  - Regularly corroborate with objective data: (CDC, 2016)
    - UDS/tox screens
    - INSPECT reports
    - Pill counts if inconsistencies or other concern
- Consider formal written agreements outlining expectations for behavior, improvement, and alternate care
  - Wise to include social support, contingency planning
  - Emergency planning PRN



# Risk factor understanding

- For patients:
  - Concern about stigma, sufficiency of care
  - Risk of harm to patient-provider relationship with request for pain treatment
  - Risk of under-reporting: inadequate pain coverage with psychological, functional impact
  - Risk of misuse and harm (but behavioral factors)
- For providers:
  - Concern about stigma, sufficiency of care
  - Legal considerations, ethics (both to under- and over-provide)
- For policy-makers:
  - Concern about stigma, societal impact (worst-case scenarios occupying attention)

# Next Steps



- With regular interdisciplinary medical assessment and treatment planning collaboration:
  - Appropriate risk stratification allows for better targeted care
  - Allowing improved data quality
  - Facilitating long-term study of efficacy and appropriateness standards to fill in gap in literature
- Psychological contributions relevant at policy level



# Contact Information

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