

Supplementary Online Content

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eTable 1. Diagnosis, Intractability, Risk Efficacy (DIRE) Score

eTable 2. Opioid Risk Tool

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Diagnosis, Intractability, Risk Efficacy (DIRE) Score^{1,a}

Item	Point value
Diagnosis	1 = Benign chronic condition with minimal objective findings or no definite medical diagnosis. Examples: fibromyalgia, migraine headaches, non-specific back pain. 2 = Slowly progressive condition concordant with moderate pain, or fixed condition with moderate objective findings. Examples: failed back surgery syndrome, back pain with moderate degenerative changes, neuropathic pain. 3 = Advanced condition concordant with severe pain with objective findings. Examples: severe ischemic vascular disease, advanced neuropathy, severe spinal stenosis.
Intractability	1 = Few therapies have been tried and the patient takes a passive role in his/her pain management process. 2 = Most customary treatments have been tried but the patient is not fully engaged in the pain management process, or barriers prevent (insurance, transportation, medical illness). 3 = Patient fully engaged in a spectrum of appropriate treatments but with inadequate response.
Risk	
Psychological	1 = Serious personality dysfunction or mental illness interfering with care. Example: personality disorder, severe affective disorder, significant personality issues. 2 = Personality or mental health interferes moderately. Example: depression or anxiety disorder. 3 = Good communication with clinic. No significant personality dysfunction or mental illness.
Chemical Health	1 = Active or very recent use of illicit drugs, excessive alcohol, or prescription drug abuse. 2 = Chemical coper (uses medications to cope with stress) or history of chemical dependence (CD) in remission. 3 = No CD history. Not drug-focused or chemically reliant.
Reliability	1 = History of numerous problems: medication misuse, missed appointments, rarely follows through. 2 = Occasional difficulties with compliance, but generally reliable. 3 = Highly reliable patient with meds, appointments & treatment.
Social Support	1 = Life in chaos. Little family support and few close relationships. Loss of most normal life roles. 2 = Reduction in some relationships and life roles. 3 = Supportive family/close relationships. Involved in work or school and no social isolation.
Efficacy	1 = Poor function or minimal pain relief despite moderate to high doses. 2 = Moderate benefit with function improved in a number of ways (or insufficient info – hasn't tried opioid yet or very low doses or too short of a trial). 3 = Good improvement in pain and function and quality of life with stable doses over time.

a – Used to predict which patients with chronic non-cancer pain will have effective analgesia and will be compliant with long-term opioid treatment. Each component (diagnosis, intractability, psychological component of risk, chemical health component of risk, reliability component of risk, social support component of risk, and efficacy) is

assigned a point value of 1, 2, or 3 based on criteria, and then the points are summed. Scores between 7 and 13 suggest that the patient is not suitable for long-term opioid analgesia. Scores between 14 and 21 suggest the patient is a good candidate for long-term opioid analgesia.

eTable 2. Opioid Risk Tool^{2,a}

Patient Reported Item	Point Value	
Family history of substance abuse		
Alcohol	Female: 1	Male: 3
Illegal drugs	Female: 2	Male: 3
Prescription drugs	Female: 4	Male: 4
Personal history of substance abuse		
Alcohol	Female: 3	Male: 3
Illegal drugs	Female: 4	Male: 4
Prescription drugs	Female: 5	Male: 5
Age (mark if aged 16-45 years)	Female: 1	Male: 1
History of preadolescent sexual abuse	Female: 3	Male: 0
Psychological disease		
Attention deficit disorder, obsessive compulsive disorder, bipolar, schizophrenia	Female: 2	Male: 2
Depression	Female: 1	Male: 1

a – Used to assess risk for opioid abuse in patients initiating opioid treatment for chronic pain. Each component that is present is marked, and the points are summed. Scores ≤ 3 indicate low risk for opioid abuse, scores between 4-7 indicate moderate risk for opioid abuse, and scores ≥ 8 indicate high risk of opioid abuse.

eTable 3. The Current Opioid Use Measure^{3,a}

Patient Reported Item	Never	Seldom	Sometimes	Often	Very often
	0	1	2	3	4
1. In the past 30 days, how often have you had trouble with thinking clearly or had memory problems?					
2. In the past 30 days, how often do people complain that you are not completing necessary tasks? (i.e., doing things that need to be done, such as going to class, work or appointments)					
3. In the past 30 days, how often have you had to go to someone other than your prescribing physician to get sufficient pain relief from medications? (i.e., another doctor, the Emergency Room)					
4. In the past 30 days, how often have you taken your medications differently from how they are prescribed?					
5. In the past 30 days, how often have you seriously thought about hurting yourself?					
6. In the past 30 days, how much of your time was spent thinking about opioid medications (having enough, taking them, dosing schedule, etc.)?					
7. In the past 30 days, how often have you been in an argument?					
8. In the past 30 days, how often have you had trouble controlling your anger (e.g., road rage, screaming, etc.)?					
9. In the past 30 days, how often have you needed to take pain medications belonging to someone else?					
10. In the past 30 days, how often have you been worried about how you're handling your medications?					
11. In the past 30 days, how often have others been worried about how you're handling your medications?					

12. In the past 30 days, how often have you had to make an emergency phone call or show up at the clinic without an appointment?					
13. In the past 30 days, how often have you gotten angry with people?					
14. In the past 30 days, how often have you had to take more of your medication than prescribed?					
15. In the past 30 days, how often have you borrowed pain medication from someone else?					
16. In the past 30 days, how often have you used your pain medicine for symptoms other than for pain (e.g., to help you sleep, improve your mood, or relieve stress)?					
17. In the past 30 days, how often have you had to visit the Emergency Room?					

a – Used to determine the likelihood of opioid misuse among patients currently receiving opioids for chronic non-cancer pain. Each component is assigned a value of 0-4 based on commonness of the item. Scores <9 suggest the patient is at low risk for current aberrant opioid related behavior. Scores ≥ 9 suggest the patient is at high risk for current aberrant opioid behavior.

eReferences.

1. Belgrade MJ, Schamber CD, Lindgren BR. The DIRE score: predicting outcomes of opioid prescribing for chronic pain. *J Pain*. 2006;7(9):671-81.
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3. Butler SF, Budman S, Fernandez KC, Houle B, Benoit C, Katz N et al. Development and validation of the Current Opioid Misuse Measure. *Pain*. 2007;130(1-2):144-156.