

Brief Assessment of Chronic Opioid Therapy (COT) Patients

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Brief Assessment of COT Patients

1. Opioid overdose risk
2. Prescription opioid misuse
3. Non-opioid substance use disorders (drugs, alcohol)
4. Prescription opioid use disorder
5. Pain control and function

Context: Brief Assessment of COT Patients

Individual differences in opioid benefits and harms are large.

Opioid effects and effectiveness may change over time.

The full range of potential harms should be reviewed with patient.

Spectrum of Medical Risks of Long-term Opioid Use *(Baldini et al., 2012)*



GroupHealth.

Medical Risks of Long-term Opioid Use

Medical risk	How common?	Description and information
Respiratory depression		
Opioid overdose	< 1% per year but increases with dose	<ul style="list-style-type: none"> - Caused by severely slowed breathing, which you may not notice - Severe cases are treated in the hospital - Can cause death
Breathing problems during sleep	Not known	<ul style="list-style-type: none"> - Opioids may cause or worsen sleep apnea - You may not notice breathing problems
Injuries		
Falls & fractures	Not known	
Motor vehicle crashes	Not known	
Gastrointestinal problems		
Constipation	30 - 40%	- It helps to use stool-softeners or drugs that stimulate bowel movements
Serious intestinal blockage	<1% per year	<ul style="list-style-type: none"> - Caused by severe constipation - Severe cases are treated in the hospital
Hormonal effects		
Hypogonadism, impotence, infertility, osteoporosis	25% - 75%	<ul style="list-style-type: none"> - <i>Hypogonadism</i> = lowered sex hormones, which can worsen sexual function - <i>Osteoporosis</i> can make you more likely to fracture or break a bone



GroupHealth.

Medical Risks of Long-term Opioid Use

Medical risk	How common?	Description and information
Cognitive and neurophysiologic effects		
Sedation	15%	- Can cause difficulty driving or thinking clearly
Disruption of sleep	Not known	
Hyperalgesia	Not known	- <i>Hyperalgesia</i> = being more sensitive to pain
Psychosocial		
Depression, anxiety, de-activation, apathy	Not known	- Depression can worsen pain, while pain can worsen depression. Opioids can cause loss of interest in usual activities, which can increase depression.
Addiction, misuse, and diversion	5 - 30%	- Common signs of prescription opioid addiction are preoccupation with opioid use or craving, unsuccessful attempts to discontinue use or cut down, cutting down or giving up activities due to opioid use, and using more medication than prescribed.
Oral Health		
Dry mouth that may sometimes cause tooth decay	Dry mouth is common	<ul style="list-style-type: none"> - Brush your teeth and rinse your mouth often - Chew sugarless gum and drink water or sugar-free, non-carbonated fluids
Myoclonus	Not Known	- <i>Myoclonus</i> = muscle twitching

Context: Brief Assessment of COT Patients

Careful observation of patient affect and behaviors is essential.

Interviewing a family member may reveal problems or benefits otherwise missed.

Best evidence indicates that substantial long-term benefits of COT are atypical and that harms are common.



Context:
Brief Assessment of COT Patients

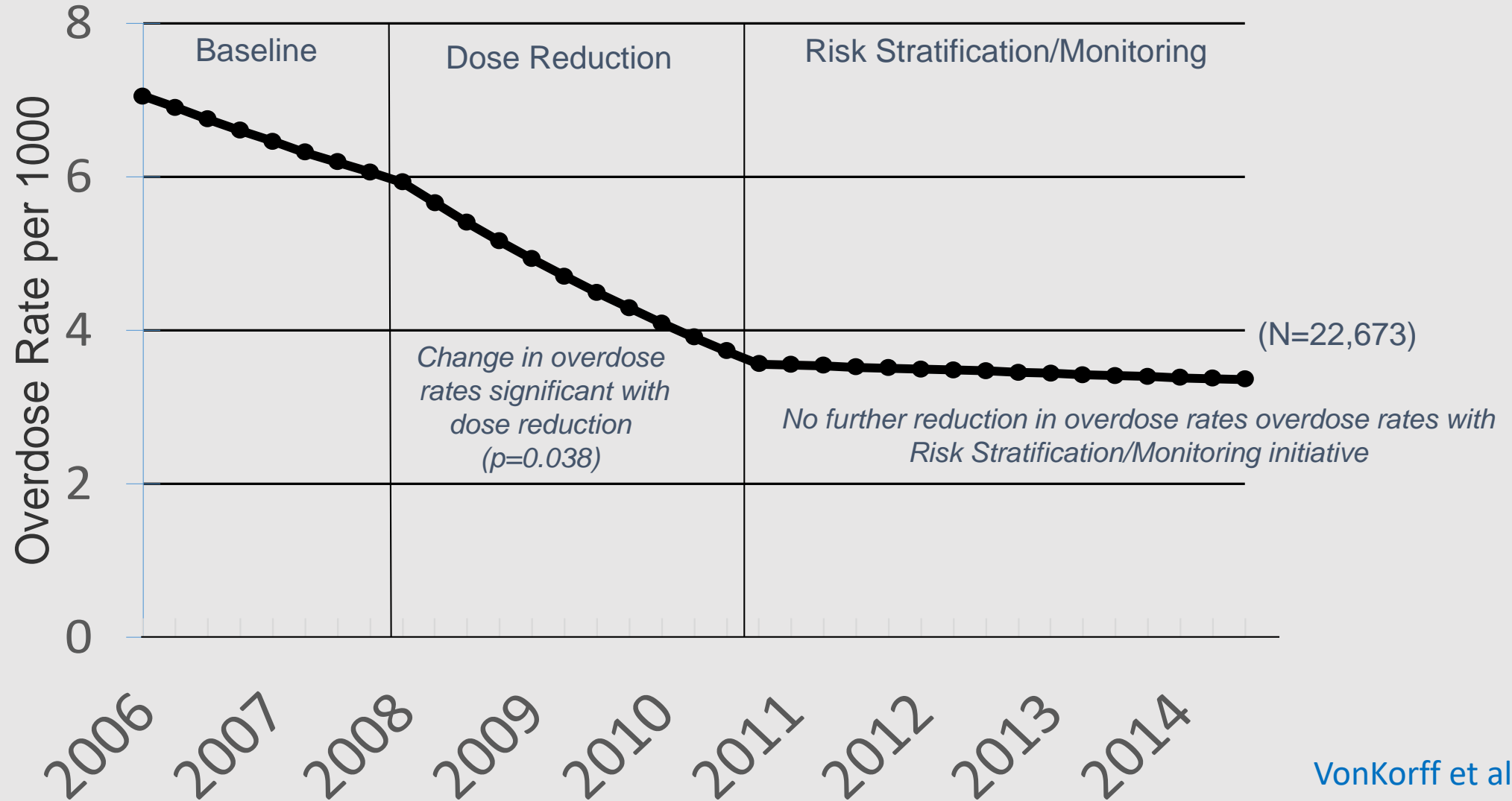
Strive for non-judgmental, de-stigmatizing, collaborative assessment.

Brief screening may inform assessment, but cannot supplant clinical observation and judgement.

Brief Assessment of Opioid Overdose Risk Among COT patients

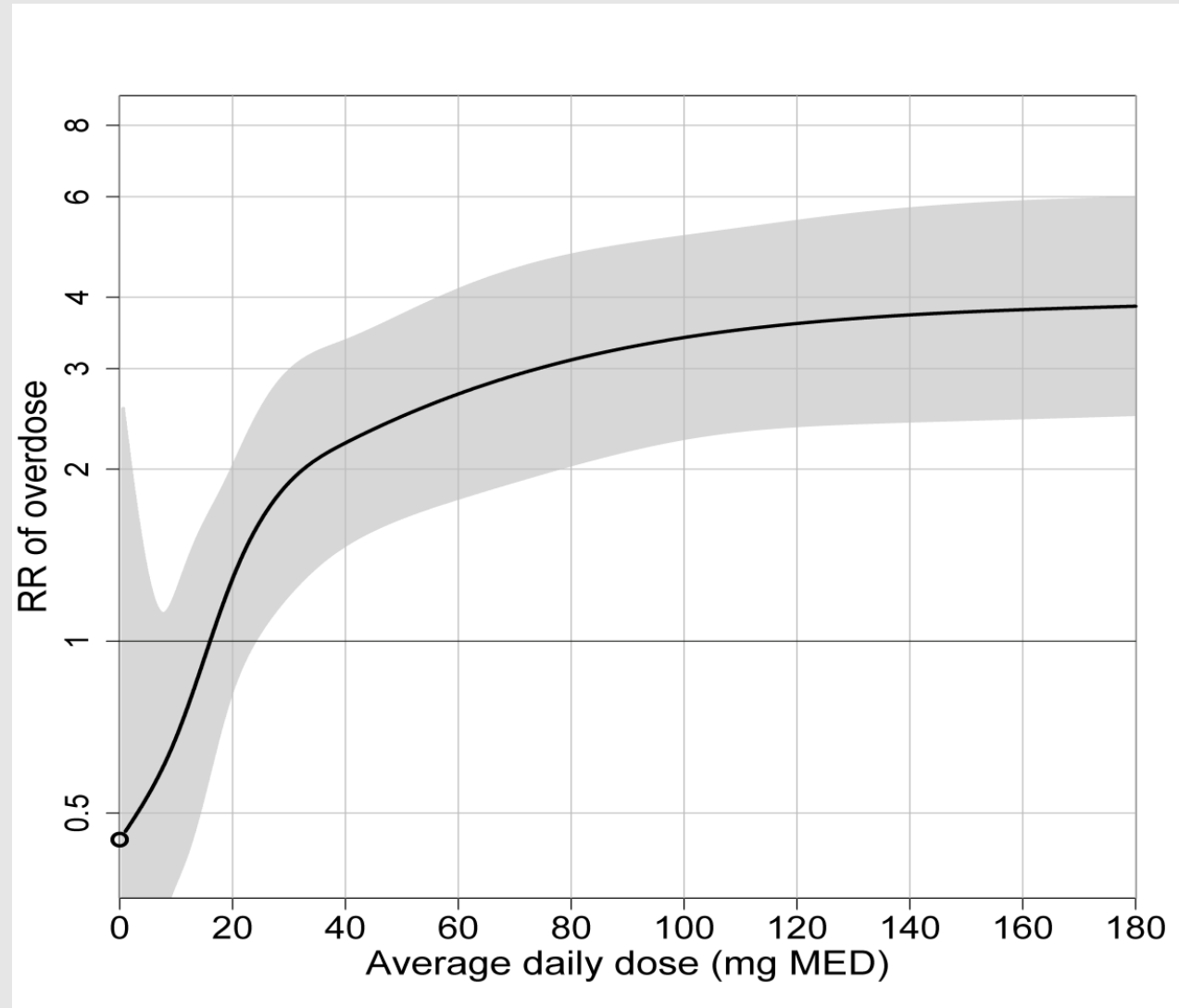
Opioid Overdose Rate (non-fatal & fatal)

Risk \approx 0.5% per year



Overdose Risk Increases with Opioid Dose Dispensed

Relative risk of opioid overdose by average daily morphine equivalent dose



Predictors of Opioid Overdose Risk from Electronic Health Records Data

	Opioid Dose	ER/LA Opioid Rx	Benzodiazapine Rx	Substance Abuse Dx	Mental Disorder Dx	Younger age	Tobacco use	c-statistic
Glanz et al. 2018		X		X	X	X	X	0.75
Liang et al. 2018	X		X	X	X	X		0.80
Lo-Ciganic et al. 2019	X	X	X	X	X	X		0.90
Zedler et al. 2015	X	X		X	X			0.90

*Positive predictive value is low because annual overdose risk is less than one percent.
Sensitivity & specificity of overdose prediction are not well established.*

Brief Assessment of
Prescription Opioid Misuse
(“Aberrant Behaviors”)

Prevalence of Prescription Opioid Misuse Among COT Patients

“Aberrant Behaviors”

Fleming et al.(N=815), 2007

Requested early refills	47 %
Increased dose on own	39 %
Felt intoxicated from pain meds	35 %
Purposeful oversedation	26 %
Drank ETOH to relieve pain	20 %
Used opioids for purposes other than pain	18 %
Hoarded pain medications	12 %
Obtained opioids from other doctors	8 %

Grande et al. (N=233), 2016

Early refills	44 %
Not taking as prescribed	31 %
Angry behavior	21 %
Obtained opioids from ED	18 %
Lost or stolen opioids	18 %
Avoided urine drug test	13 %
Undisclosed prescribers	6 %

Performance of Screeners in Identifying Persons with Problem Opioid Use *Replication Samples Only*

 Screener	Number of Items	Study N	Sensitivity	Specificity	Study reference
COMM	17	226	71 %	71 %	Butler et al. 2010
ORT	5	142	25 %	83 %	Jones et al. 2015
SOAPP-R	24	302	79 %	52 %	Butler et al. 2009
Count of Electronic Health Records risk indicators	7	2752	60 %	72 %	Hylan et al. 2015

Health Records Indicators Predicting Onset of Problem Opioid Use *(Hylan et al. 2015)*

[c = 0.72]

Risk Factor for Opioid Overdose

Younger age	Yes
Opioid abuse/dependence Dx	Yes
Non-opioid drug abuse/dependence Dx	Yes
Alcohol abuse/dependence Dx	Yes
Mental disorder Dx	Yes
Current tobacco use	Yes
Hepatitis C Dx	Not known

Opioid dose and ER/LA opioid use not assessed in Hylan et al. prospective study because risk factors were assessed prior to initiation of opioid use

Brief Assessment of Non-Opioid Substance Use Disorders (Drug, Alcohol)

Prevalence of Substance Use Problems Among COT Patients (N=1848)

(Saunders et al., 2011)

Any drug use disorder in prior 3 years (electronic health records)	13.4 %
Any alcohol use disorder in prior 3 years (electronic health records)	6.7 %
Self-report of drug or alcohol problems (Lifetime)	22.1 %
Alcohol use disorder, AUDIT-C score of 7+	2.0 %
Any of the above	31.3 %
Alcohol use: 2+ drinks within two hours of taking opioids in prior 2 weeks	12.4 %

Screening for Current Drug Use Disorder in Primary Care

Screenener	Number of Items	N	Sensitivity	Specificity	Reference
Single item screener	1	286	100%	74%	<i>Smith et al. 2010</i>
DAST-10	10	286	100%	77%	<i>Smith et al. 2010</i>

Single item:

“How many times in the past year have you used an illegal drug or used a prescription drug for non-medical reasons?”

Screening for Risky Consumption/Alcohol Use Disorder in Primary Care

Screeners	Number of Items	N	Sensitivity	Specificity	Reference
Single item screener	1	286	82%	79%	<i>Smith et al. 2009</i>
AUDIT-C	10	286	74%	83%	<i>Smith et al. 2009</i>

Single item:

Female: "In the past year, how many times have you had 4 or more drinks in a day?"

Male: "In the past year, how many times have you had 5 or more drinks in a day?"

Brief Assessment of Prescription Opioid Use Disorder

Prescription Opioid Use Disorder: DSM5 Criteria

2-3 criteria = mild 4-5 criteria = moderate 6-7 criteria = severe

1. Taking the opioid in larger amounts and for longer than intended
2. Wanting to cut down or quit but not being able to do it
3. Spending a lot of time obtaining the opioid
4. Craving or a strong desire to use opioids
5. Repeatedly unable to carry out major obligations at work, school, or home due to opioid use
6. Continued use despite persistent or recurring social or interpersonal problems caused or made worse by opioid use
7. Stopping or reducing important social, occupational, or recreational activities due to opioid use
8. Recurrent use of opioids in physically hazardous situations
9. Consistent use of opioids despite persistent/recurrent physical or psychological difficulties from using opioids
10. Tolerance: need for markedly increased amounts to achieve intoxication or desired effect or markedly diminished effect with continued use *
11. Withdrawal: Withdrawal syndrome or substance used to avoid withdrawal *

** These criteria are not met for individuals taking opioids solely under appropriate medical supervision*

Prevalence of Prescription Opioid Use Disorder Among COT Patients

Boscarino et al. 2011 (Lifetime) (N=705)	Total	35 %
Degenhardt et al. 2016 (Lifetime) (N=1422)	Mild	12 %
	Moderate/severe	9 %
	Total	21 %
Von Korff et al. 2017 (Prior year) (N= 1442)	Mild	17 %
	Moderate/severe	5 %
	Total	22%

Screening for Prescription Opioid Use Disorder in Primary Care

No validated screeners

Screening for Prescription Opioid Use Disorder in Primary Care: Common DSM5 Indicators Among Cases *(VonKorff et al, 2017)*

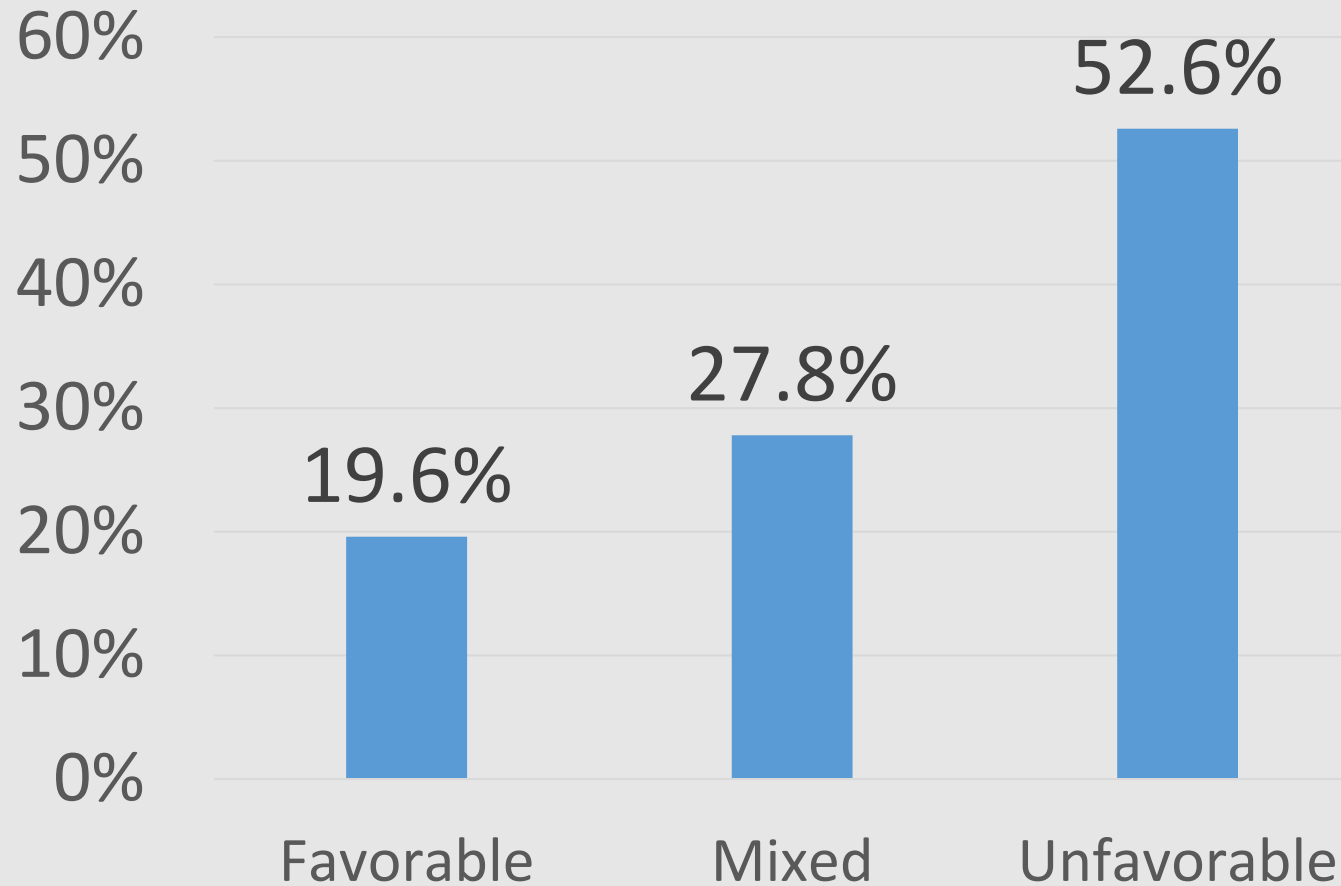
	Percent of Moderate/Severe <u>Cases (N=73)</u>
Wanted/tried to cut down more than once & was unable *	93 %
Gave up or cut down important activities due to opioids *	74 %
Strong urge/desire to use opioids or preoccupied with use of opioids *	67 %
Used more than intended or longer than planned *	58 %
Continued opioid use despite physical or emotional problems due to opioids *	51 %

* Assessment items from the PRISM interview section for prescription opioid use disorder (Hasin et al. 2006)

Brief Assessment of Pain Control & Function

Favorable/Unfavorable Pain and Function Status Among COT Patients

(LeResche et al. 2015)



N = 2163

UNFAVORABLE: 2 or more true:

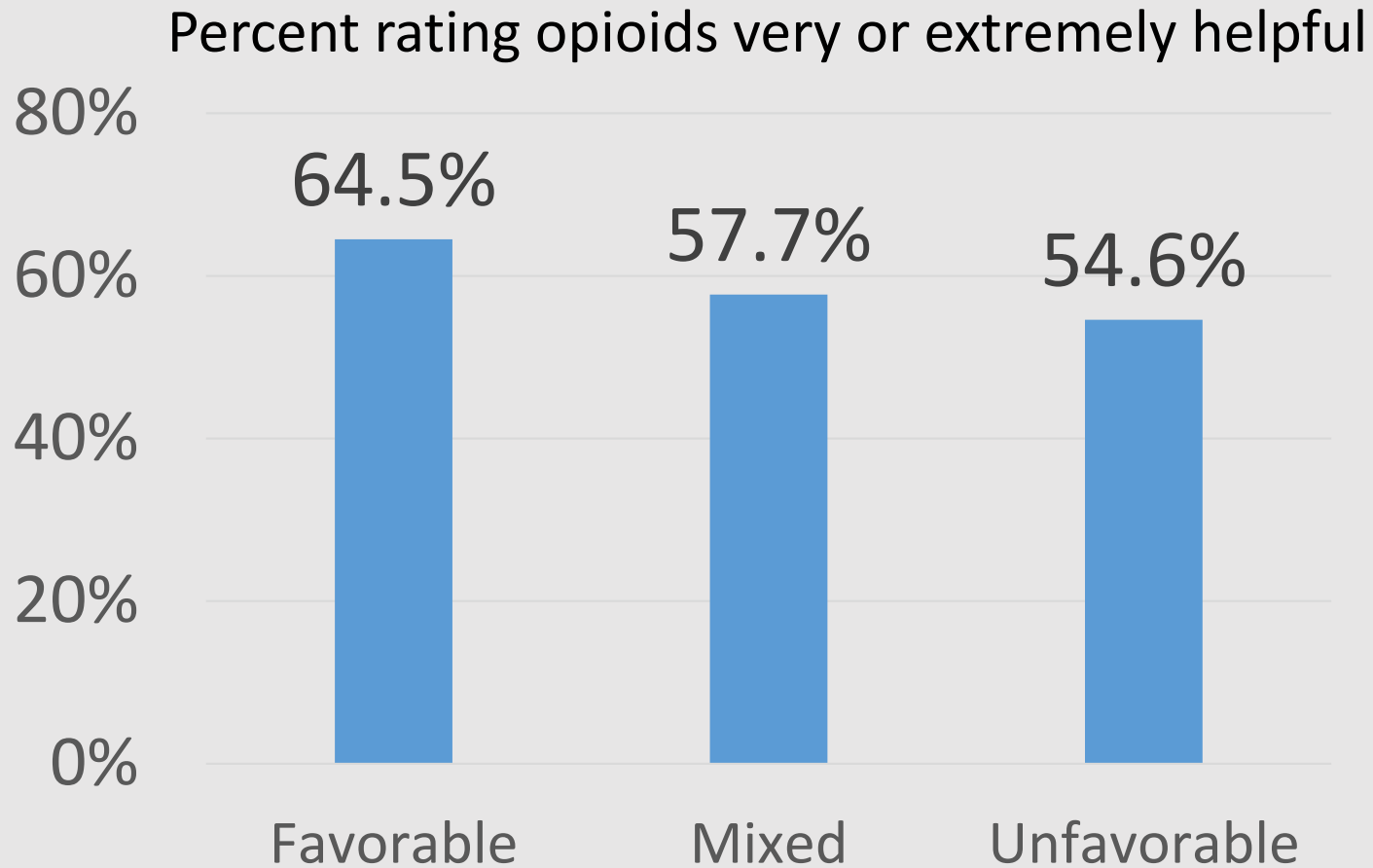
- Usual pain intensity ≥ 7 out of 10
- Pain interference ≥ 7 out of 10
- ≥ 7 out of 11 pain impact items positive
- Kept from usual activities ≥ 30 days due to pain in prior 90 days

FAVORABLE: 2 or more true:

- Usual pain intensity < 4 out of 10
- Pain interference < 4 out of 10
- < 4 out of 11 pain impact items positive
- Kept from usual activities < 6 days due to pain in prior 90 days

Percent of COT Patients Rating Opioids Very or Extremely Helpful by Pain & Function Status

(LeResche et al. 2015)Percent

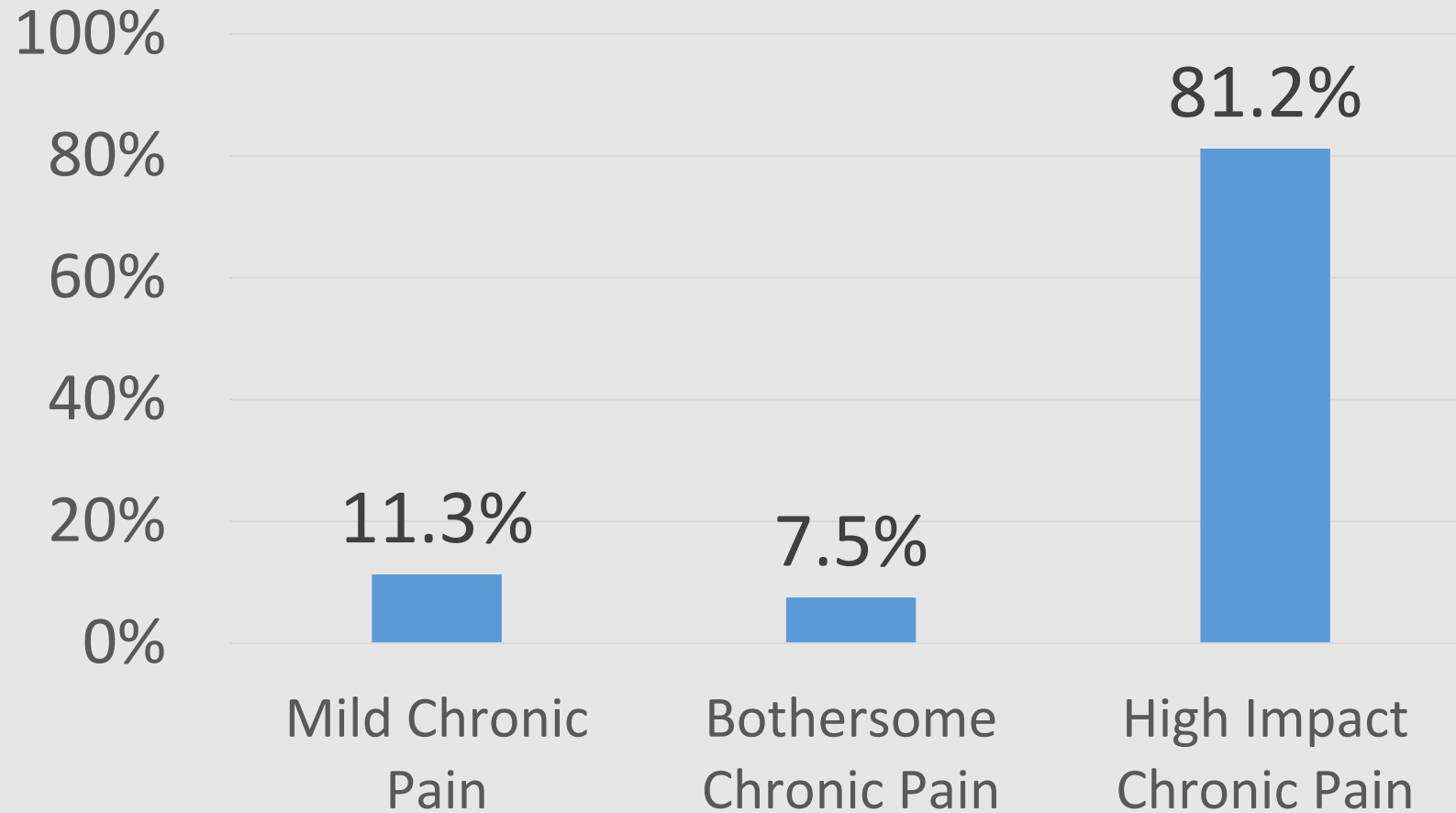


N = 2163

Pain and Function Status

Chronic Pain Grade (Revised) Among COT Patients with Chronic Pain

(VonKorff et al. work in progress)



*High impact chronic pain: Pain limits life or work activities on most or every day in the past 3 months
-OR- Unable to work due to pain.*

Brief Assessment of Pain Control and Function

The 3 item PEG provides useful information on pain status, interference and quality of life.

Simple questions developed to assess high impact chronic pain and inability to work due to pain can be used to assess function.

Brief Assessment of Pain and Function: Patient Self-Report Items

Graded Chronic Pain Scale-Revised

- * 1. In the past 3 months, **how often** did you have pain?
- Never Some days Most days Every day

If you never had pain in the past 3 months, skip to Q7.

- * 2. Over the past 3 months, **how often did pain limit your life or work activities?**
- Never Some days Most days Every day

Now think about pain you have had during the past 7 days...

3. What number best describes **your pain, on average?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

4. During the past 7 days, what number best describes how **pain has interfered with your enjoyment of life?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

5. During the past 7 days, what number best describes how **pain has interfered with your general activity?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

- * 6. Are you **not working or unable to work** due to pain or a pain condition?
- Yes No

PEG

* Items to assessing high impact chronic pain for Graded Chronic Pain Revised

Conclusions and Implications

- Screening for overdose risk will have low positive predictive value due low base rates (< 1% per year). Sensitivity and specificity not established.
- Screening scales for opioid misuse have moderate/variable accuracy.
- Use of electronic health records indicators to screen for opioid overdose and opioids misuse risk is an option.
- Simple, direct questions can identify drug/alcohol abuse with moderate accuracy.
- Severe pain and poor function are reported by > half of all COT patients.
- Pain and function can be assessed with brief, simple questions.
- It has not been established that risk screening is effective in preventing opioid overdose and addiction among COT patients.

Brief Assessment of COT Patients with Self-Report Questions

Recommendations

1. Pain and function (patient self-report):
PEG + High impact chronic pain questions (Chronic Pain Grade Scale Revised)
2. Drug and Alcohol Abuse (patient self-report):
Single item screeners
3. Prescription opioid use disorder (patient self-report):
Commonly reported DSM-5 indicators of prescription opioid use disorder
4. Risk indicators for opioid overdose and problem opioid use (electronic health records):
Opioid dose, ER/LA, Substance use disorders, Mental disorders, etc.
5. Use screening questions in context of clinical assessment which includes open-ended questions and interviewing family members (when feasible).

Brief Assessment of COT Patients with Electronic Health Records Indicators

Recommendations

Chronic opioid therapy average daily dose (greater than 50 mg. MED)

Chronic opioid therapy average daily dose (greater than 90 mg. MED)

Use of ER/LA opioids

Any use of sedatives/benzodiazapines

Chronic use of sedatives/benzodiazapines

Opioid abuse/dependence Dx

Non-opioid drug or alcohol abuse/dependence Dx

Mental disorder Dx

Risk of overdose and opioid misuse increases with number of positive indicators

Brief Assessment of COT Patients with Patient Self-Report Items

Graded Chronic Pain Scale-Revised

1. In the past 3 months, **how often** did you have pain?

Never Some days Most days Every day

If you never had pain in the past 3 months, skip to Q7.

*

2. Over the past 3 months, **how often did pain limit your life or work activities?**

Never Some days Most days Every day

Now think about pain you have had during the past 7 days...

3. What number best describes **your pain, on average?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

4. During the past 7 days, what number best describes how **pain has interfered with your enjoyment of life?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

5. During the past 7 days, what number best describes how **pain has interfered with your general activity?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

*

6. Are you **not working or unable to work** due to pain or a pain condition?

Yes No

*

High impact chronic pain: Pain limited life of activities most or every day or unable to work due to pain = Positive

7. How many times in the past year have you used an illegal drug or used a prescription drug for non-medical reasons?

Any use = Positive

8. In the past year, how many times have you had 4 or more drinks (female) -OR- 5 or more drinks (male) in a day?

4+ drinks (female) or 5+ drinks (male) = Positive

9. Have you more than once tried to give up or cut down on your use of opioid pain medicines and been unable to do so?

Yes = Positive

10. Have you ever felt a strong urge or desire to take opioid pain medicines?

Yes = Positive

11. Have you ever continued to use opioid pain medicines despite emotional or physical problems related to their use?

Yes = Positive

PEG