



**Community Rounds Workshop Series** 

# Applying Motivation-Phase Interventions to Treat Tobacco Use Among People with Opioid Use Disorder

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# **Disclosures**

There is nothing to disclose for this UVM CORA Community Rounds session.

#### **Potential Conflict of Interest:**

All potential conflicts of Interest have been resolved prior to the start of this program.

All recommendations involving clinical medicine made during this talk were based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

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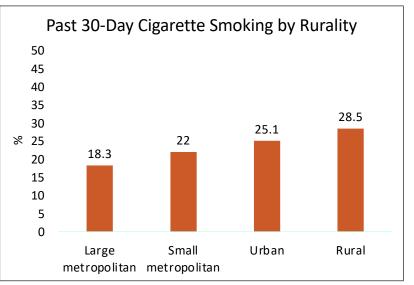
# Outline

- Tobacco use in rural communities
- Tobacco use & opioid use disorder (OUD)
- Initiating a quit attempt vs quit success
- Treatment for people who are not ready to quit smoking
- Current tobacco treatment effort for people with OUD
- Questions



# **Tobacco Use in Rural States**

- The prevalence of cigarette smoking is highest in rural counties
- Rurality is associated with higher smoking-associated cancer and mortality

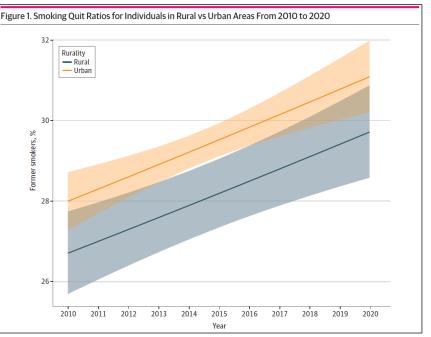


National Survey on Drug Use and Health, 2016; Villanti et al., 2021



# **Tobacco Cessation in Rural States**

- People in rural communities are less likely to successfully quit
- There is a persistent rural vs urban disparity in quit ratio (former smokers/ever smokers)



Parker et al., 2022



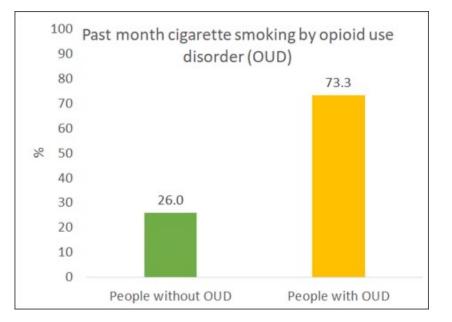
# **Recommended paper**





# **Tobacco & Opioid Use**

• People with OUD experience nearly 3-fold higher prevalence of smoking vs those without

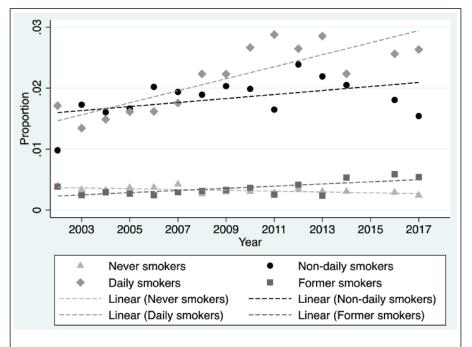


Parker et al., 2020; Parker et al., 2018



# **Tobacco & Opioid Use**

• The high co-occurrence of OUD and smoking is persistent over time



**Figure 1**. Prevalence of opioid use disorder by cigarette smoking status from 2002 to 2017. Data from the National Surveys on Drug Use and Health.

Parker et al., 2021



# **Tobacco & Opioid Use**

- Smoking increases cardiovascular disease and is the 2nd leading cause of death for people with OUD
- 4-fold higher mortality rate among people with OUD who smoke vs do not smoke
- Tobacco use is associated with increased likelihood of relapse to other substance use
- Smoking cessation treatment <u>does not</u> disrupt treatment for OUD

### **Tobacco treatment for people with OUD is crucial**

Apollonio, 2016; Hser et al., 2017; Hser et al., 1994; Prochaska et al., 2004; Weinberger et al., 2017



# Smoking cessation treatment for people with OUD

- Brief counseling alone is insufficient
- Pharmacotherapy is effective
- Contingency management is effective
  - Medium-large effect
  - Relapse common after discontinuation

Study	Cohen <i>d</i> (95% CI)		Favors contro		vors tervention		Relative weight
Sigmon et al, <sup>69</sup> 2016	0.46 (-0.04 to 0.96)	_					37.57
Tuten et al, <sup>70</sup> 2012	0.95 (0.56 to 1.44)						38.27
Dunn et al, <sup>71</sup> 2010	1.03 (0.37 to 1.68)						24.16
Total (95% CI)	0.78 (0.43 to 1.14)				$\leq$	$\rightarrow$	100.00
		-1.0	-0.5	0	0.5	1.0	
			Cohen	d (95	% CI)		

Bolivar et al., 2021; Vlad et al., 2020



# Smoking cessation treatment for people with OUD

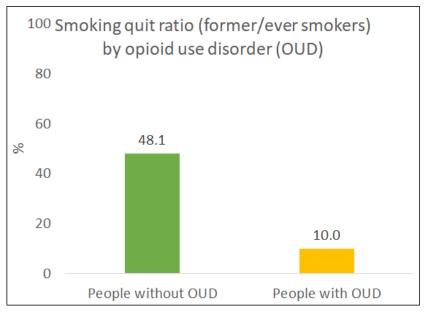
- Brief counseling alone is insufficient
- Contingency management is effective
  - Implementation is often a barrier
- Pharmacotherapy is effective
  - NRT vs placebo increases smoking cessation by 1.5 to 3.6-fold at a 6-month follow-up

Bolivar et al., 2021; Vlad et al., 2020



### Barriers to smoking cessation among people with OUD

- Smokers with vs without OUD are ~5 times less likely to quit smoking
- Common barriers include:
  - High nicotine dependence
  - Opioid-nicotine interaction may facilitate co-use
  - Co-occurring psychiatric symptoms
  - Low Tx engagement



Lichtenstein et al., 2019; Parker et al., 2020; Vlad et al., 2020; Yee et al., 2018



# **Recommended review**

Review Article Published: 27 February 2020

### Achieving Smoking Cessation Among Persons with Opioid Use Disorder

Cynthia Vlad, Julia H. Arnsten & Shadi Nahvi 🖂

<u>CNS Drugs</u> 34, 367–387 (2020) <u>Cite this article</u>



# **Readiness to Quit Smoking**

- Most (>70%) adults who smoke cigarettes are not ready to quit in the near future.
  - Readiness could be due to motivation, self-efficacy, or intention to quit
- Residents of rural communities are less likely to report readiness to quit in the next 6 months than urban residents.
- People with OUD report readiness to quit comparable to the general population of US smokers.

Reid et al., 2019; Vlad et al., 2020; Wewers et al., 2003



# **Readiness to Quit Smoking**

### • Readiness to quit is fluid

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**Figure 2.** Examples of multiple transitions across intention, smoking, reduction, and abstinence states for six participants. Columns represent days of the study. Rows represent individual participants. Black boxes represent a day of intentional abstinence. Gray boxes represent a day of reduction in cigarettes/day by  $\geq$ 50%. An I represents a day in which, on the night before, smokers reported they planned not to smoke that day.

Hughes et al., 2013; Hughes et al 2014; Peters & Hughes 2009



# **Motivation Phase Interventions**

- Tailored to meet the needs of a person who is not currently ready to quit.
- Often focused on initiating a quit attempt
- Few trials have tested tobacco treatment among smokers with OUD who not ready to quit smoking.
  - None have shown effectiveness.



Baker et al., 2011; Hall et al., 2018; Stein et al., 2006



# Initiating a quit attempt

• Predictors of quit attempts ≠ predictors of quit success

Addiction

REVIEW



doi:10.1111/j.1360-0443.2011.03565.x

Predictors of attempts to stop smoking and their success in adult general population samples: a systematic review

Eleni Vangeli<sup>1</sup>, John Stapleton<sup>1</sup>, Eline Suzanne Smit<sup>2</sup>, Ron Borland<sup>3</sup> & Robert West<sup>1</sup>



# Initiating a quit attempt

Among people not ready to quit?

Nicotine & Tobacco Research, 2020, 1–7 doi:10.1093/ntr/ntaa051 Original Investigation Received November 27, 2019; Editorial Decision March 12, 2020; Accepted March 18, 2020 Advance Access publication April 01, 2020

**Original Investigation** 

### Predictors of Smoking Cessation Attempts and Success Following Motivation-Phase Interventions Among People Initially Unwilling to Quit Smoking

Elias M. Klemperer PhD<sup>1,o</sup>, Robin Mermelstein PhD<sup>2</sup>, Timothy B. Baker PhD<sup>3</sup>, John R. Hughes MD<sup>1,o</sup>, Michael C. Fiore MD, MPH, MBA<sup>3</sup>, Megan E. Piper PhD<sup>3,o</sup>, Tanya R. Schlam PhD<sup>3,o</sup>, Douglas E. Jorenby PhD<sup>3</sup>, Linda M. Collins PhD<sup>4</sup>, Jessica W. Cook PhD<sup>3</sup>



# Initiating a quit attempt vs successful cessation

- 2x2x2x2 factorial trial (N=517)
  - NRT patch
  - NRT gum
  - Reduction counseling
  - Motivational counseling
- Treatment lasted 6 weeks
- Secondary analysis examined predictors of quit attempts and 7-day point prevalence abstinence at 26 weeks

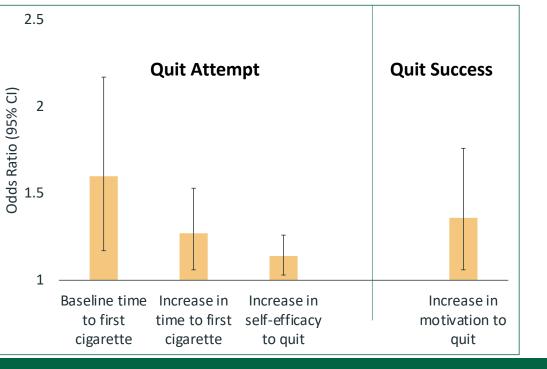
Cook et al., 2016; Klemperer et al., 2020



### **Predictors of quit attempts ≠ predictors of quit success**

	Quit attempt OR (95% CI)	Quit success OR (95% CI)
Cigarettes per day	,	(
Baseline	1.0 (0.95, 1.02)	0.99 (0.91, 1.07
Reduction: baseline to week 6	0.99 (0.95, 1.02)	1.07 (0.97, 1.18
Time to first cigarette	0.77 (0.75, 1.04)	1.07 (0.27, 1.18
Baseline	1.60 (1.17, 2.17)	1.07 (0.63, 1.82
Increase: baseline to week 6	1.30(1.17, 2.17) 1.27(1.06, 1.53)	0.89 (0.63, 1.25
Motivation to quit	1.27 (1.00, 1.55)	0.05 (0.05, 1.25
Baseline	1.04 (0.93, 1.17)	1.19 (0.91, 1.55
Increase: baseline to week 6	1.05(0.95, 1.17)	1.36 (1.06, 1.76
Quitting self-efficacy	1.05 (0.25, 1.17)	1.50 (1.00, 1.70
Baseline	1.10 (0.98, 1.26)	1.10 (0.88, 1.37
Increase: baseline to week 6	1.14 (1.03, 1.26)	0.96 (0.80, 1.16
Anticipated urge to smoke if quit	1.14 (1.05, 1.20)	0.20 (0.00, 1.10
Baseline	0.98 (0.87, 1.11)	0.87 (0.70, 1.10
Reduction: baseline to week 6	0.97 (0.87, 1.08)	1.15 (0.93, 1.43
Positive affect	0.97 (0.07, 1.00)	1.15 (0.25, 1.45
Baseline	1.10 (0.97, 1.25)	0.98 (0.76, 1.26
Increase: baseline to week 6	1.07 (0.95, 1.20)	0.92 (0.73, 1.15
Negative affect	1107 (0150, 1120)	0.02 (0.00, 1.10
Baseline	1.04 (0.93, 1.17)	0.97 (0.78, 1.22
Reduction: baseline to week 6	0.96 (0.87, 1.06)	0.97 (0.81, 1.17
Time spent around others		
who smoke		
Baseline	1.05 (0.83, 1.34)	1.42 (0.90, 2.24
Reduction: baseline to week 6	0.86 (0.67, 1.09)	1.48 (0.97, 2.25

Table 3 Findings From Multivariable Models That Included All



Klemperer et al., 2020



# **Initiating a Quit Attempt is the First Step**



Experimental and Clinical Psychopharmacology

© 2022 American Psychological Association ISSN: 1064-1297

https://doi.org/10.1037/pha0000583

### A Systematic Review and Meta-Analysis of Interventions to Induce Attempts to Quit Tobacco Among Adults Not Ready to Quit

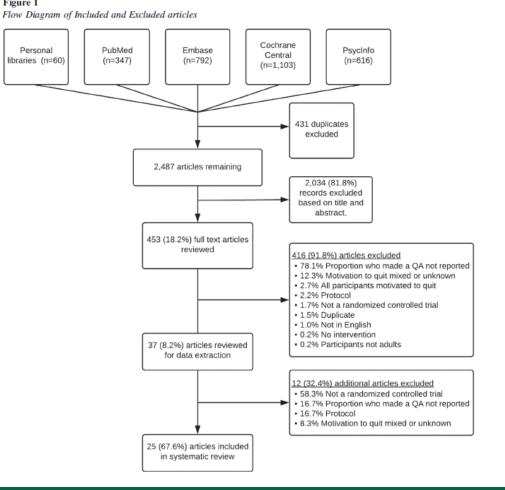
Elias M. Klemperer<sup>1, 2</sup>, Joanna M. Streck<sup>3</sup>, Nicola Lindson<sup>4</sup>, Julia C. West<sup>1, 2</sup>, Alan Su<sup>5</sup>, John R. Hughes<sup>1, 2</sup>, and Matthew J. Carpenter<sup>6</sup>



# **Literature Review**

Figure 1

• N=25 trials included in the systematic review



Klemperer et al., 2022



# **Meta-analysis**

- High heterogeneity resulted in a series of small meta-analyses:
  - 1. Motivational counseling (n=8)
  - 2. Reduction counseling (n=5)
  - 3. Combined Motivational + Reduction counseling (n=2)
  - 4. NRT alone (n=6)
  - 5. NRT with Reduction counseling (n=4)
  - 6. NRT with Motivational counseling (n=2)
  - 7. NRT with Motivational + Reduction counseling (n=3)
  - 8. Varenicline (n=3)
  - 9. Very Low Nicotine Content (VLNC) cigarettes (n=4)

Klemperer et al., 2022



# Results

- NRT and Varenicline were the only two effective interventions
- Low certainty in pooled effects
- I will come back to this

Klemperer et al., 2022

Quit Attempts	NRT Brie	ef advice or N			Risk Ratio	Risk Ratio
Study or Subgroup		Events		Weight I	M-H, Random, 95% Cl	
5.1.1 NRT Alone vs.						
Engle 2019	56 98	19	31	10.8%	0.93 [0.67, 1.29]	1
Kruse 2020 (1)	4 5	5	6	3.6%	0.96 [0.55, 1.69]	
Carpenter 2020	77 258	91	315	17.9%	1.03 [0.80, 1.33]	
Cook 2021	21 37	17	35	6.0%	1.17 [0.75, 1.82]	
Etter 2002	74 265	155	658		1.19 [0.93, 1.50]	
Carpenter 2011 (2)	183 426	144	423	39.3%	1.26 [1.06, 1.50]	
Subtotal (95% CI)	1089		1468		1.14 [1.03, 1.28]	
total events	415	431				
Heterogeneity: Tau <sup>2</sup> =	= 0.00; Chi <sup>2</sup> = 3.87, c	df = 5 (P = 0).	57); $I^2 =$	0%		
Test for overall effect	Z = 2.43 (P = 0.02)					
1						
5.1.2 NRT Alone vs.	Brief Advice					
Kruse 2020 (3)	3 5	5	6	1.8%	0.72 [0.32, 1.60]	ı
Total (95% CI)	1094		1474	100.0%	1.13 [1.02, 1.26]	] ◆
Total events	418	436				
Heterogeneity: Tau <sup>2</sup> =		f = 6 (P = 0.	52); I <sup>2</sup> =	0%		
Test for overall effect						Favors Comparison Favours Intervention
Test for subgroup dif	ferences: Chi <sup>2</sup> = 1.27	', df = 1 (P =	0.26), l <sup>2</sup>	= 21.0%		· · · · · · · · · · · · · · · · · · ·
				E.	Varenicline	
Quit Attempts						
Quit Attempts	Varenicline	Counseling			Risk Ratio	Risk Ratio
Study or Subgroup				aht M_I	H, Random, 95% Cl	M–H, Random, 95% Cl
9.1.1 Varenicline +				ight M-I	i, Kandoni, 55% Ci	
				0.00/	1 00 [0 77 4 00]	
Carpenter 2021	10 25	5	24 6	5.9%	1.92 [0.77, 4.80]	
0.1.2.1/	C					
9.1.2 Varenicline +						_
Hughes 2011	63 107			8.1%	1.28 [0.99, 1.66]	
Steinberg 2018	8 25			5.0%	2.24 [0.77, 6.55]	
Subtotal (95% CI)	132	1	39 93	3.1%	1.32 [1.02, 1.72]	-
Total events	71	55				
Heterogeneity: Tau	= 0.00; Chi <sup>2</sup> $= 1.0$	1, df = 1 (P	= 0.31);	$ I^2 = 1\%$		
Test for overall effe	ct: $Z = 2.10 (P = 0.0)$	04)				
Total (95% CI)	157	10	63 100	0.0%	1.36 [1.07, 1.72]	•
Total events	81	60				
Heterogeneity: Tau <sup>2</sup>	$^{2} = 0.00$ ; Chi <sup>2</sup> = 1.6	5, $df = 2$ (P	= 0.44);	$I^2 = 0\%$		
						0.1 0.2 0.5 1 2 5
Test for overall effe	CC: $Z = Z.48 (P = 0.0)$					Favors Comparison Favors Intervention

A. NRT Alone



# What about counseling?



# The USPHS Recommended 5Rs Motivational Intervention

- Relevance
  - Open ended questions
  - Affirmations
  - Reflective listening
  - Summary reflections
- Risks from smoking
  - Short-term and long-term
  - Support "change talk"

- Rewards from quitting
  - Common examples: health, money, children
- Roadblocks to quitting
  - Express <u>accurate</u> empathy
  - Engage in problem solving & advice to quit
- Repetition

Fiore et al., 2008



# **Cochrane Review on Motivational Interviewing**

Review: Motivational interviewing for smoking cessation Comparison: 2 Min addition to other SC treatment versus that SC treatment alone Outcome: 1 All studies: cessation

Study or subgroup	MI + other SC care Oth n/N	her SC care only n/N	Risk Ratio M-H,Random,95% Cl	Weight	Risk Ratio M-H,Random,95% Cl
Bastian 2013	29/245	35/251	_ <b></b>	10.5 %	0.85 [ 0.54, 1.34 ]
Battaglia 2016	3/89	13/86		3.1 %	0.22 [ 0.07, 0.76 ]
Bock 2008	24/271	15/272		7.9 %	1.61 [ 0.86, 2.99 ]
Bock 2014	48/406	58/440	-	12.4 %	0.90 [ 0.63, 1.28 ]
Cook 2016 (1)	0/33	3/33 🕇		0.6 %	0.14 [ 0.01, 2.66 ]

Authors' conclusions

There is insufficient evidence to show whether or not MI helps people to stop smoking compared with no intervention, as an addition to other types of behavioural support for smoking cessation, or compared with other types of behavioural support for smoking cessation. It is also unclear whether more intensive MI is more effective than less intensive MI. All estimates of treatment effect were of low certainty because of concerns about bias in the trials, imprecision and inconsistency. Consequently, future trials are likely to change these conclusions. There is almost no evidence on whether MI for smoking cessation improves mental well-being.

19/204

16/137

41/144

5/27

0/27





44/205

15/138

97/259

4/28

1/28

Louwagie 2014

Marshall 2016

McClure 2005

Tevyaw 2009

Vidrine 2019 (9)

0.02 0.1 1 10 50

.

97%

3.1 %

7.3 %

0.5 %

13.5 %

100.0 %

Favours other care Favours MI + other care

2.30 [ 1.40, 3.81 ]

0.77 [ 0.23, 2.57 ]

0.93[0.48,1.81]

2.90 [ 0.12, 68.15 ]

1.32 [ 0.97, 1.78 ]

1.07 [ 0.85, 1.36 ]



# Research on the 5Rs among smokers not ready to quit

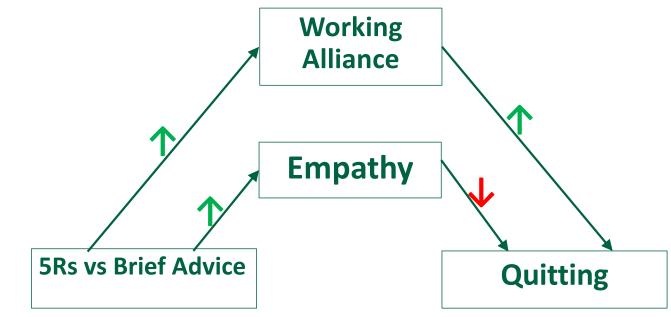
<u>Trial</u>	<u>Comparison</u>	<b>Cessation</b>
Carpenter 2004	No treatment	$\checkmark$
Catley 2016	Brief advice	$\checkmark$
Klemperer 2017	Brief advice	$\checkmark$
	Diferaditee	V

Carpenter et al., 2004; Catley et al., 2016; Klemperer et al., 2017

OR=2.2 to 6.3



# **5Rs "Active Ingredients"**



Klemperer et al., 2017



# **Cutting Down to Quit**

- <u>Timed Reduction:</u>
  - Collaboratively create a smoking schedule by dividing # of cigarettes by # of waking hours
  - Gradually increase time between cigarettes
- Hierarchical Reduction:
  - Collaboratively create a hierarchy of easiest to most difficult cigarettes to give up in a typical day
  - Gradually reduce, beginning with the easiest

Cincirpini et al., 1995



# **Considerations: Cutting Down to Quit**

- There is no standard reduction protocol
- Magnitude of reduction?
- Duration of reduction?
- Goal must be abstinence
  - Reduction in cigarettes often ≠ harm reduction
  - Reduction is not a substitute for quitting

Hughes & Carpenter, 2006; Chang et al., 2021



# **Cochrane Review** on Cutting Down to Quit

### Review: Smoking reduction interventions for smoking cessation Comparison: 2 Reduction to quit versus abrupt quitting Outcome: 1 Abstinence

Study or subgroup	Reduction to quit n/N	Abrupt quitting n/N	Risk Ratio M-H,Random,95% Cl	Weight	Risk Ratio M-H,Random,95% Cl	
Carpenter 2003	5/32	3/35	· · · · ·	1.1 %	1.82 [ 0.47, 7.02 ]	
Carpenter 2004	37/212	46/197	· •	6.9 %	0.75 [ 0.51, 1.10 ]	
Chan 2011	74/928	10/226		3.7 %	1.80 [ 0.95, 3.43 ]	
Cinciripini 1995	20/65	17/63	- <del></del>	4.7 %	1.14 [ 0.66, 1.97 ]	
Cook 2016 (1)	2/32	7/32	s <del></del> s	0.9 %	0.29 [ 0.06, 1.27 ]	
Cook 2016 (2)	2/30	0/33		0.2 %	5.48 [ 0.27, 109.83 ]	
Cook 2016 (3)	1/33	6/35		0.5 %	0.18 [ 0.02, 1.39 ]	
Cook 2016 (4)	2/32	1/14		0.4 %	0.88 [ 0.09, 8.88 ]	
Cook 2016 (5)	4/37	3/33	1	1.0 %	1.19 [ 0.29, 4.93 ]	
Cook 2016 (6)	7/34	4/34		1.5 %	1.75 [ 0.56, 5.43 ]	
Cook 2016 (7)	3/32	1/32		0.4 %	3.00 [ 0.33, 27.33 ]	
Cook 2016 (8)	7/30	2/14		1.0 %	1.63 [ 0.39, 6.88 ]	
Cumminas 1988	35/662	23/615		5.0 %	1.41 [ 0.85, 2.36 ]	

#### Authors' conclusions

There is moderate-certainty evidence that neither reduction-to-quit nor abrupt quitting interventions result in superior long-term quit rates when compared with one another. Evidence comparing the efficacy of reduction-to-quit interventions with no treatment

odnifer 1992	12/55	14/55		3.5 70	0.00[0.44, 1.00]
Hao 2017	86/157	58/157	-	9.7 %	1.48 [ 1.16, 1.90 ]
Ho 2018	1/50	4/50		0.4 %	0.25 [ 0.03, 2.16 ]
Hughes 2010 (11)	6/148	8/150		1.7 %	0.76 [ 0.27, 2.14 ]
Hughes 2010 (12)	6/149	21/299	<del></del>	2.3 %	0.57 [ 0.24, 1.39 ]
Jerome 1999a	43/415	39/296	+	6.6 %	0.79 [ 0.52, 1.18 ]
Joseph 2008	9/78	9/74	-+-	2.4 %	0.95 [ 0.40, 2.26 ]
Klemperer 2017 (13)	8/93	18/185		2.7 %	0.88 [ 0.40, 1.96 ]
Klemperer 2017 (14)	8/93	7/189	÷	1.9 %	2.32 [ 0.87, 6.21 ]
Lindson-Hawley 2016b	53/342	78/355	+	8.3 %	0.71 [ 0.51, 0.97 ]
Ostroff 2014	30/96	28/89	+	6.3 %	0.99 [ 0.65, 1.52 ]
Perez-Milena 2012	13/43	12/48		3.5 %	1.21 [ 0.62, 2.36 ]
Riley 2005	21/227	19/196	-+-	4.2 %	0.95 [ 0.53, 1.72 ]
Wang 2017	30/559	29/518		5.3 %	0.96 [ 0.58, 1.57 ]
otal (95% CI)	4922	4297	•	100.0 %	1.01 [ 0.87, 1.17 ]
otal events: 584 (Reduction t eterogeneity: Tau <sup>2</sup> = 0.04; C est for overall effect: Z = 0.1 est for subgroup differences:	hi² = 43.54, df = 3 5 (P = 0.88)	pt quitting) 1 (P = 0.07); I <sup>2</sup> =299	6		

Favours abrupt quitting Favours reduction to quit

Lindson N, Klemperer E, Hong B, Ordóñez-Mena JM, Aveyard P. Smoking reduction interventions for smoking cessation. Cochrane Database of Systematic Reviews. 2019(9).



# Cigarette Reduction

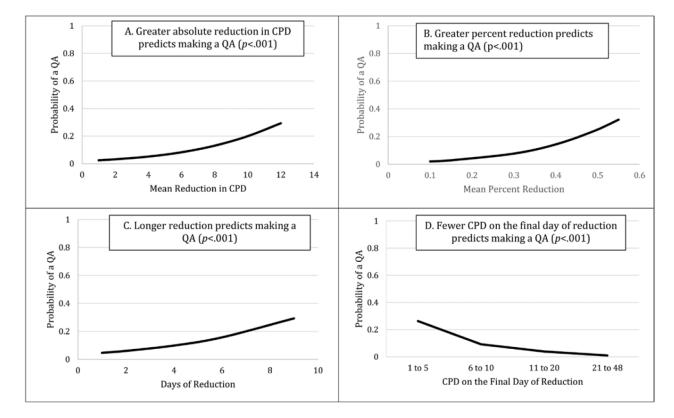
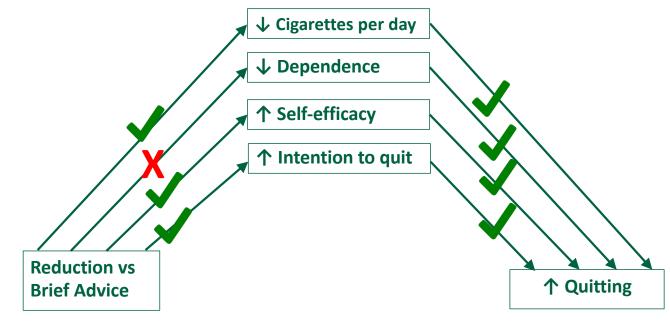


Figure 2. Reduction episodes without the intention to quit predict making a QA on the day after an episode in a dose-related manner. CPD = cigarettes per day; QA = quit attempt.

Klemperer et al., 2018



# **Cutting Down to Quit "Active Ingredients"**



Klemperer et al., 2017



# Where to start?



# **Meta-analysis Results**

A. NRT Alone								
Quit Attempts								
	NRT	-	Brief advice or	No Tx		Risk Ratio	Risk Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl	
5.1.1 NRT Alone vs. N	lo NRT							
Engle 2019	56	98	19	31	10.8%	0.93 [0.67, 1.29]	<b>_</b>	
Kruse 2020 (1)	4	5	5	6	3.6%	0.96 [0.55, 1.69]		
Carpenter 2020	77	258	91	315	17.9%	1.03 [0.80, 1.33]		
Cook 2021	21	37	17	35	6.0%	1.17 [0.75, 1.82]		
Etter 2002	74	265	155	658	20.6%	1.19 [0.93, 1.50]		
Carpenter 2011 (2)	183	426	144	423	39.3%	1.26 [1.06, 1.50]	-#-	
Subtotal (95% CI)		1089		1468	98.2%	1.14 [1.03, 1.28]	◆	
Total events	415		431					
Heterogeneity: Tau <sup>2</sup> =	0.00; Ch	$i^2 = 3.$	87, df = 5 (P = 0)	).57); I <sup>2</sup> =	0%			
Test for overall effect:	Z = 2.43	(P = 0)	).02)					
5.1.2 NRT Alone vs. B	rief Adv	ice						
Kruse 2020 (3)	3	5	5	6	1.8%	0.72 [0.32, 1.60]		
Total (95% CI)		1094		1474	100.0%	1.13 [1.02, 1.26]	◆	
Total events	418		436					
Heterogeneity: Tau <sup>2</sup> =			, .	.52); I <sup>2</sup> =	0%		0.1 0.2 0.5 1 2 5 10	
Test for overall effect:			,				Favors Comparison Favours Intervention	
Test for subgroup diff	erences:	$Chi^2 =$	1.27, df = 1 (P =	= 0.26), l <sup>2</sup>	= 21.0%			

Klemperer et al., 2022



# **Nicotine Replacement Therapy (NRT) Sampling**

• NRT sampling = Providing a brief supply of NRT to all smokers, regardless of motivation or intention to quit.

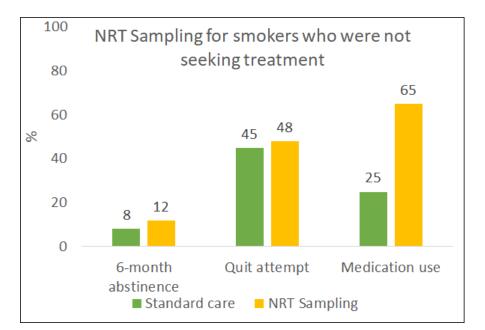




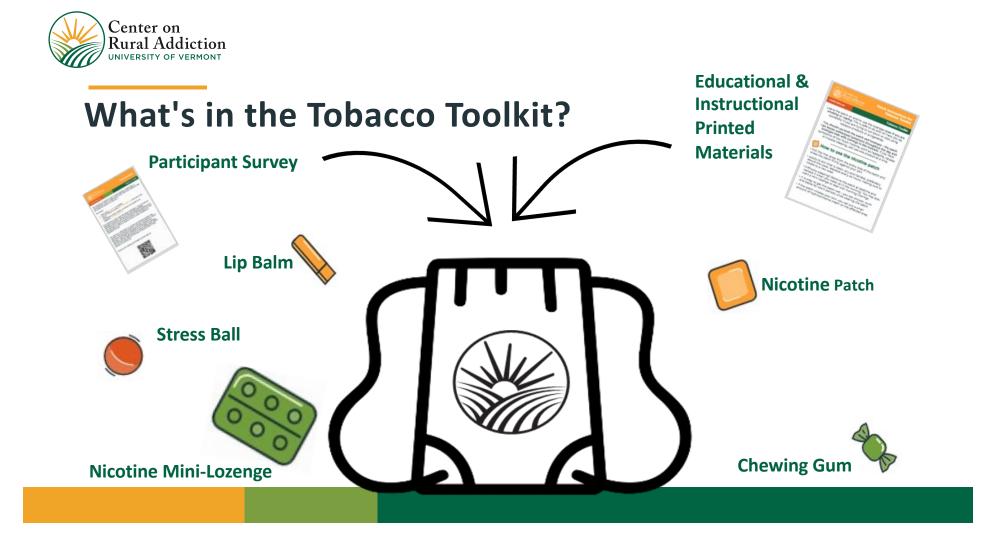
# **Nicotine Replacement Therapy (NRT) Sampling**

### **NRT** sampling

- Increases treatment engagement
- Increases quit attempts among smokers who did not plan to quit
- Increases cessation



Carpenter et al., 2011; Carpenter et al., 2020; Dahne et al., 2018





# **NRT Best Practices**

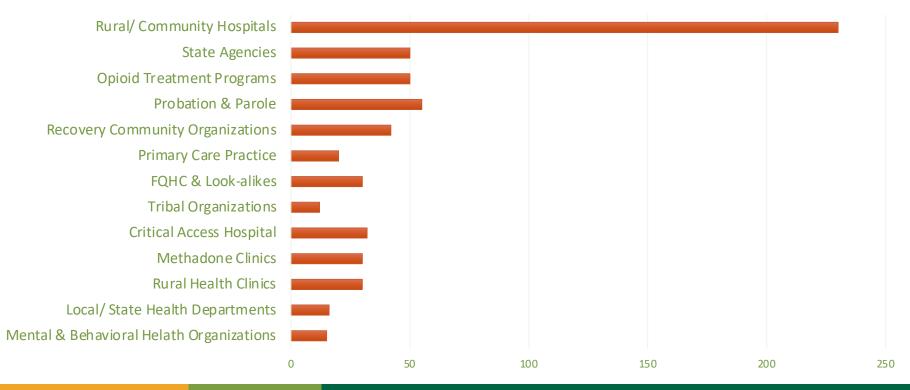
- Encourage use of dual NRT (patch + gum or lozenges)
- Encourage pre-cessation NRT
- Continue NRT during a smoking lapse



Lindson et al., 2019; Shiffman & Ferguson 2008



#### Rural Addiction UNIVERSITY OF VERMONT TObacco Toolkits: Organizations Receiving Them



42

### **Total Toolkits Distributed: 612**



# **Providers Who Requested Tobacco Toolkits**

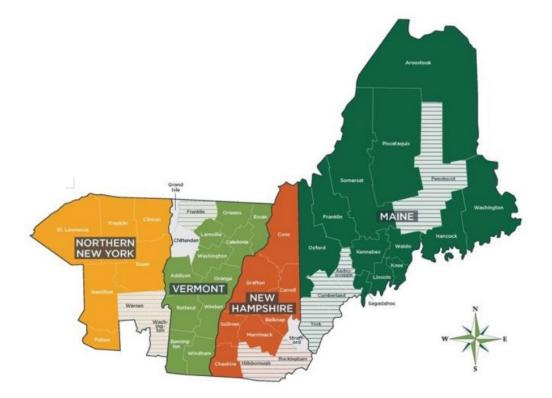
- Nurse Practitioners
- Certified Substance Use Counselors
- Recovery Coaches
- Community Health Educators
- Registered Nurses
- Program Managers
- Masters Level Clinicians
- Medical Doctors





# Who is Eligible for the Tobacco Toolkits?

- Live in rural or partially rural county
- Prescribed medications for opioid use disorder
- No NRT contraindications





# Questions? Elias.Klemperer@med.uvm.edu

# To request Tobacco Treatment Toolkits, contact: <u>cora.bp@uvm.edu</u>





# Thank you!

Stay up to date on all CORA happenings! Subscribe to our quarterly newsletter at: <u>uvmcora.org/subscribe</u>



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# Three Rural Centers of Excellence (RCOEs)



# Center on Rural Addiction



#### **Recovery Center of Excellence**

#### **University of Rochester**

- Reduce morbidity and mortality related to SUD
- Working to engage communities/ reduce stigma, save lives, and support primary care
- Serving any rural community, with focus on 39 counties in KY, NY, OH, PA, TN, WV



#### Fletcher Group

- Expansion of Recovery Housing Capacity & Quality
- Rural Recovery Ecosystem Support Services: Employment, Housing, Transportation
- Evidenced-Based Education & Training
- Working Across Rural U.S.

Find us at: www.uvmcora.org or cora@uvm.edu Find us at: recoverycenterofexcellence.org

Find us at: www.fletchergroup.org

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#### University of Vermont

- Expanding evidence-based treatment and harm reduction for OUD and other SUDs via education, technical assistance, and resources
- Patient focused approaches serving the needs of rural populations through innovative technology and telehealth strategies
- VT, NH, ME, Northern NY