

# *Tobacco Use and Mental Illness: Addressing the Hidden Epidemic*

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# Goals of this presentation

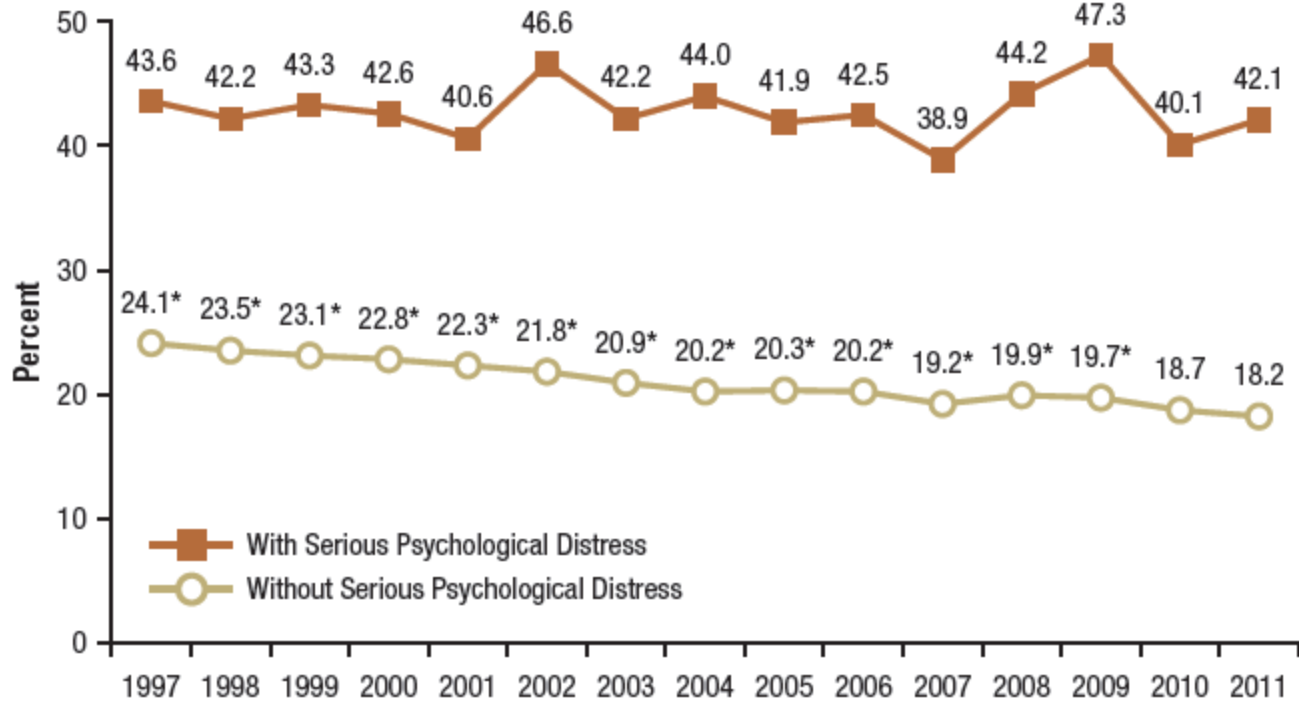
- Describe factors associated with tobacco use among persons living with mental and behavioral health challenges
- Discuss best practices and interventions to address tobacco treatment in behavioral health settings

# Why Engage Persons with mental and behavioral health challenges in Tobacco Treatment?



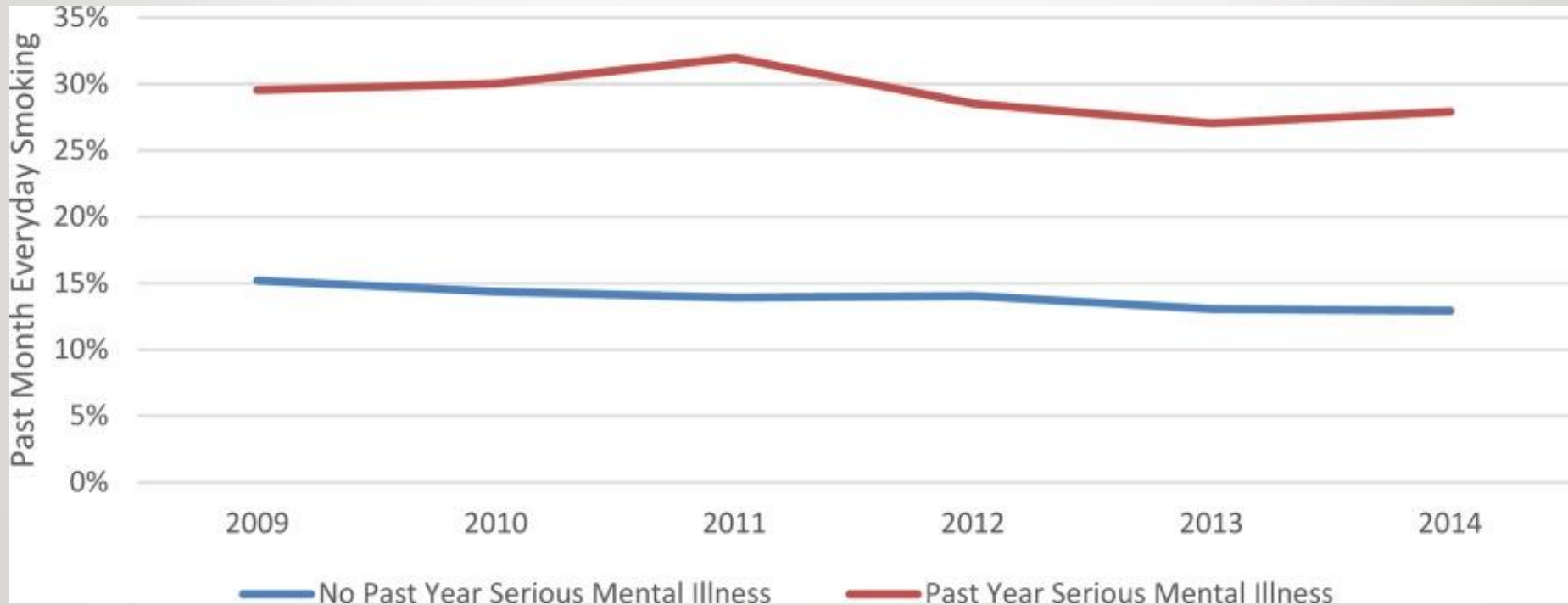
# Current Smoking among Adults Aged 18 or Older, by Past Month Serious Psychological Distress Status: NHIS, 1997 to 2011

# Prevalence Trends

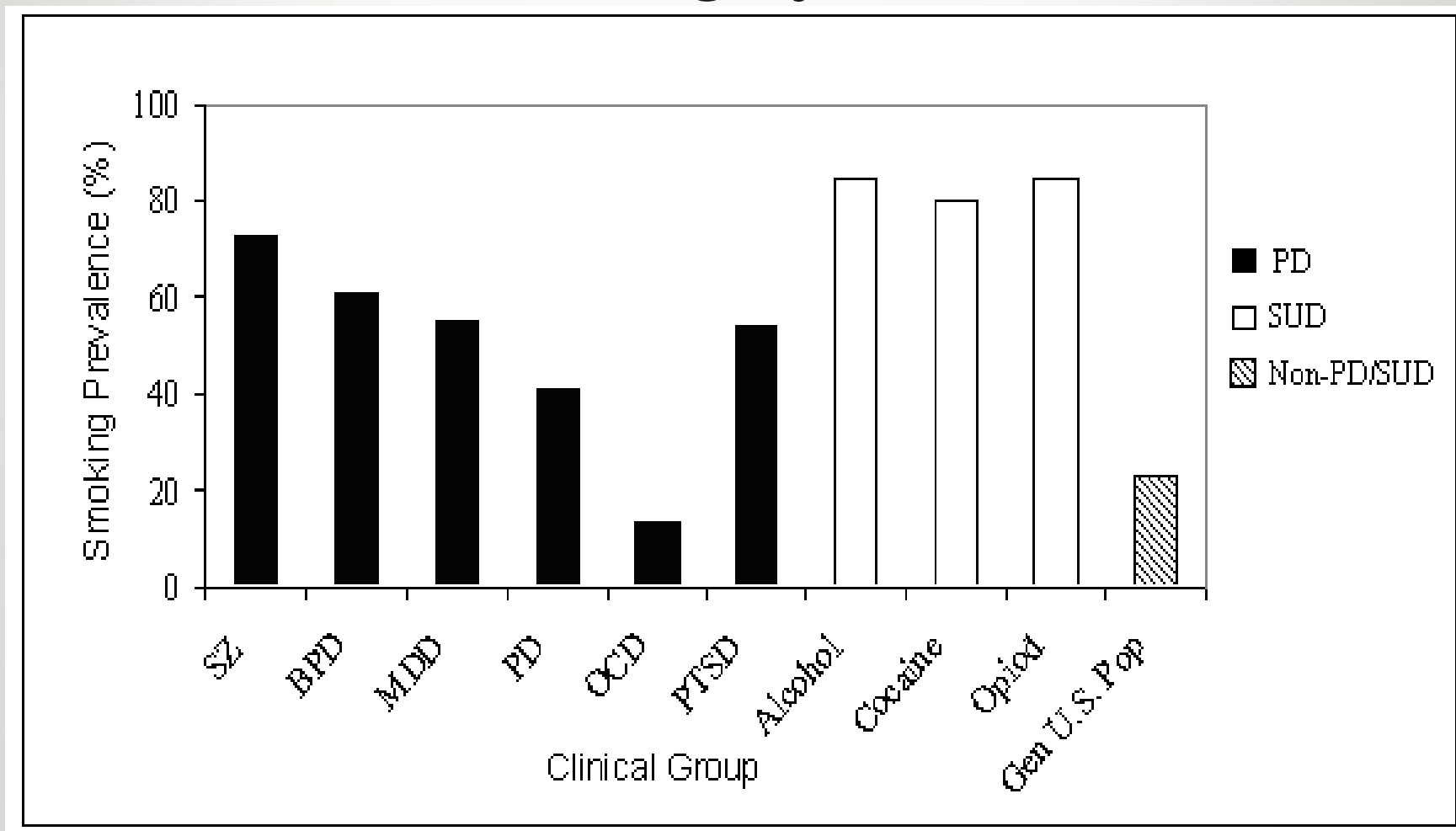


\* Difference between estimate and estimate for 2011 is statistically significant at the .05 level.

# Gaps remain in smoking prevalence among those with serious mental illnesses



# Prevalence of Smoking by MI/SUD Disorder



Kalman, Morissette, & George. "Co-Morbidity of Smoking in Patients with Psychiatric and Substance Use Disorders." *The American journal on addictions / American Academy of Psychiatrists in Alcoholism and Addictions* 14.2 (2005): 106–123. PMC. Web. 7 Mar. 2016

# Effects of smoking among persons with MI/SUD

## Smokers with MI/SUD:

- Die 10-25 years earlier
- Have more depression and anxiety
- Have more substance use problems
- Have more cardiovascular and cardiopulmonary problems
- Are more likely to commit suicide
- Have sexual problems

## Nonsmokers with MI/SUD:

- Have better health
- Live longer
- Need less medication
- Have less depression
- Save more money

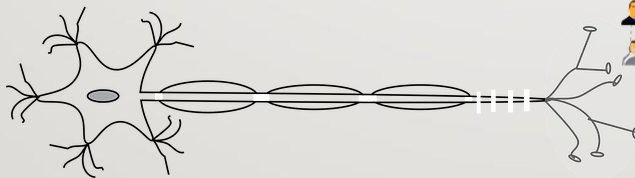
# Smoking is the leading cause of death in individuals with mental illness and substance use disorders!



Smoking tobacco causes more deaths among clients in substance abuse treatment than the alcohol or drug use that brings them to treatment. A seminal 11-year retrospective cohort study of 845 people who had been in addictions treatment found that 51 percent of deaths were the result of tobacco-related causes.<sup>1</sup> This rate is twice that found in the general population and nearly 1.5 times the rate of death by other addiction-related causes. Despite these statistics, most substance abuse treatment programs do not address smoking cessation.



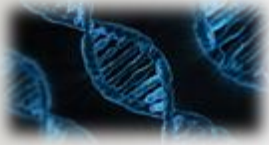
# Why do people with MI/SUD use tobacco?



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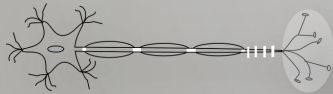
# Reasons for smoking among persons with MI

## Genetic



- Smoking and **major depression** <sup>1,2</sup>
- Nicotine dependence and **PTSD** <sup>3</sup>
- Smoking behaviors and **schizophrenia** <sup>4</sup>

## Bio-behavioral



- Nicotine reduces **sensorimotor gating** in schizophrenia <sup>5</sup>
- Smoking reduces brain levels of **MAO-A** (an enzyme linked to depression) <sup>6</sup>
- Nicotine may be an **anxiolytic** <sup>7</sup>

## Psychosocial



- Smoking used as a **'token economy'** in mental health facilities <sup>8</sup>
- Smoking encouraged as a means of **enhancing 'socialization'** among patients<sup>9</sup>

1. Kendler, et al. Smoking and Major Depression: A Causal Analysis. Archives of General Psychiatry 1993; 50:36-43
2. Lyons, et al. A twin study of smoking, nicotine dependence, and major depression in men. Nicotine & Tobacco Research 2008; 10:97 – 108
3. Koenen, et al. A Twin Registry Study of the Relationship Between Posttraumatic Stress Disorder and Nicotine Dependence in Men. Arch Gen Psych 2005; 62:1258-1265
4. Farone, et al. (2004). A novel permutation testing method implicates sixteen nicotinic acetylcholine receptor genes as risk factors for smoking in Schizophrenia families
5. Postma, et al. (2006). Psychopharmacology, 184: 589–599
6. Fowler, et al. (1996). Proceedings of the National Academy of Sciences of the United States of America, 93:14065-14069
7. McCabe, et al. (2004). Journal of Anxiety Disorders, 18:7-18
8. Lawn S. Cigarette smoking in psychiatric settings: occupational health, safety, welfare and legal concerns. Australian and New Zealand J Psych 2005; 39:886-891
9. Kawachi I, Berkman L. Social ties and mental health. Journal of Urban Health 2001; 78:458-467

# Reasons to treat tobacco use in persons with MI

They <b>WANT</b> to quit!	Siru et al., 2009	Review study (9 studies)	<ul style="list-style-type: none"> <li>• 50% contemplating cessation</li> </ul>
	Stockings et al., 2013	Australia (97 inpatients)	<ul style="list-style-type: none"> <li>• 47% made quit attempt in previous year</li> </ul>
	Du Plooy, et al., 2016	South Africa (116 male inpatients)	<ul style="list-style-type: none"> <li>• 59.4% attempted to quit in the previous year</li> </ul>
They <b>ARE ABLE</b> to quit!	Anthenelli et al., 2016	RCT (8144 with & without MI)	<ul style="list-style-type: none"> <li>• Pharmacotherapy (VAR, BUP, NRT) superior to placebo in both groups</li> </ul>
	Prochaska et al., 2013	RCT (224 inpatient smokers)	<ul style="list-style-type: none"> <li>• Motivational counseling + NRT initiated in hospital increased quitting success</li> </ul>
Cessation <b>IMPROVES</b> Psychiatric symptoms	Taylor et al., 2021	Meta-analysis (102 studies)	<ul style="list-style-type: none"> <li>• Cessation associated with improvements in depression, anxiety, stress, mood and quality of life</li> </ul>

1. Siru, R.; Hulse, G.K.; Tait, R.J. Assessing motivation to quit smoking in people with mental illness: A review. *Addiction* **2009**, *104*, 719-733

2. Stockings, et al. Readiness to quit smoking and quit attempts among australian mental health inpatients. *Nicotine & Tobacco Research* **2013**, *15*, 942-949.

3. Du Plooy, et al. (2016). Cigarette smoking, nicotine dependence, and motivation to quit smoking in South African male psychiatric inpatients. *BMC psychiatry*, *16*(1), 403.

4. Anthenelli, et al. (2016). Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *The Lancet*, *387*(10037), 2507-2520. doi:10.1016/S0140-6736(16)30272-0

5. Prochaska, et al. Efficacy of initiating tobacco dependence treatment in inpatient psychiatry: A randomized controlled trial. *Am J Public Health* **2013**, *104*, 1557-1565

6. Taylor, G. M., Lindson, N., Farley, A., Leinberger-Jabari, A., Sawyer, K., te Water Naudé, R., ... & Aveyard, P. (2021). Smoking cessation for improving mental health. *Cochrane Database of Systematic Reviews*, (3).

# Our responsibility

“All smokers with psychiatric disorders, including substance use disorders, should be offered tobacco dependence treatment, and clinicians must overcome their reluctance to treat this population....

Treating tobacco dependence in individuals with psychiatric disorder is made more complex by the potential for multiple psychiatric disorders and multiple psychiatric medications.”

*(Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline)*



# What can be done? What works



# CDC Recommendations for behavioral health settings



Stopping practices that encourage tobacco use (such as not providing cigarettes to patients and not allowing staff to smoke with patients)



Making entire campus 100% tobacco-free



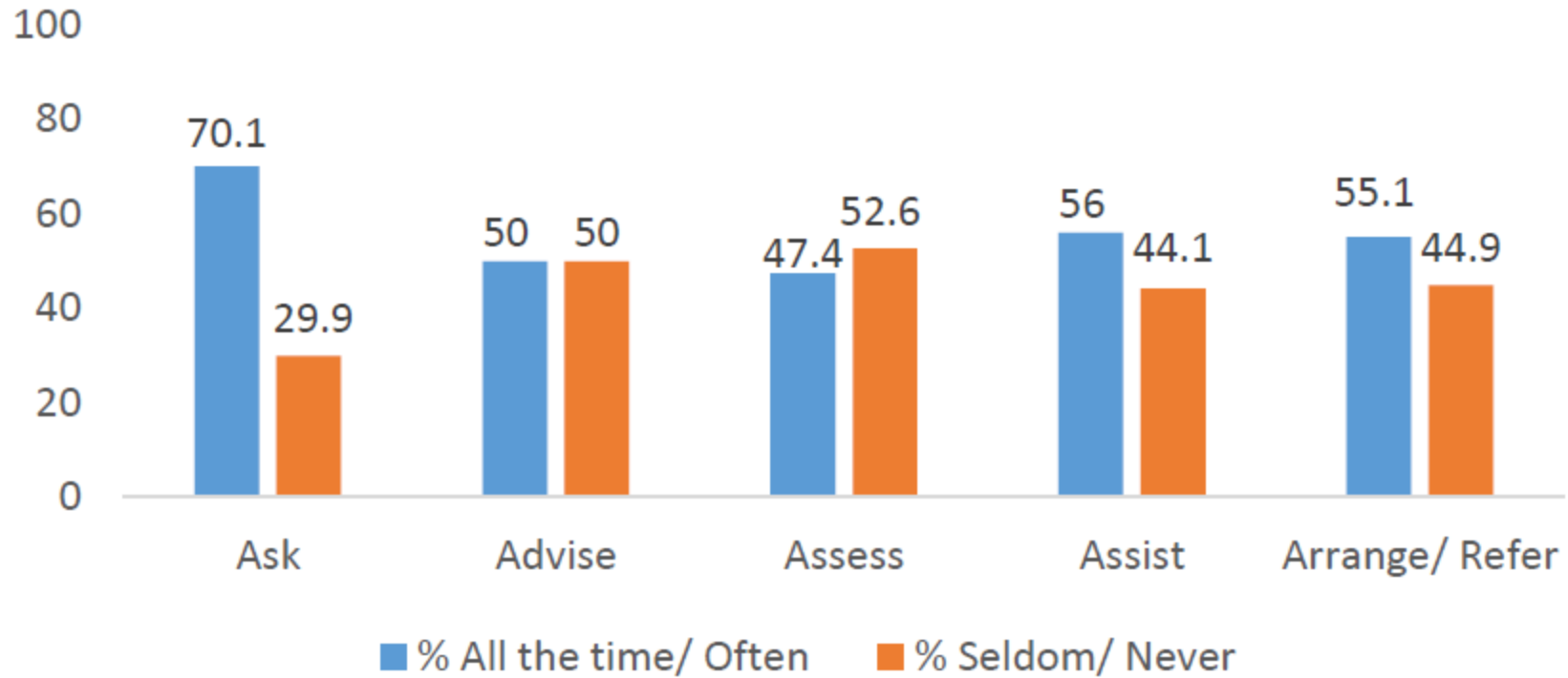
Including tobacco treatment as part of mental health treatment and wellness

**Table 1. Key findings from the CMHC's provider policy survey**

	n	%
<b>Provider Role</b>		
Manager/ Supervisor	82	51.6
Staff Member	49	30.8
Healthcare Provider	28	17.6
<b>Facility has "No Smoking" signs displayed</b>	92	57.9
<b>Facility has a written policy restricting tobacco product use</b>	131	82.4
• Policy highlights impact of tobacco use on physical health	29	18.2
• Policy highlights impact of tobacco use on mental health	14	8.8
<b>Facility provides tobacco treatment services</b>	45	28.3
<b>Facility interested in training on tobacco free policy</b>	81	50.9
<b>Facility interested in tobacco treatment specialist training</b>	88	55.3
<b>Facility interested in community tobacco treatment referral resources</b>	106	66.7

# Kentucky CMHC Tobacco Policy and Treatment Survey 2019-2020

# Brief Interventions





# Community (Outpatient)-Based Approaches

## Participation Station, Lexington, KY

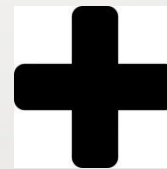


1. Okoli, C. T., Mason, D. A., Brumley-Shelton, A., & Robertson, H. (2017). Providing Tobacco Treatment in a Community Mental Health Setting: A Pilot Study. *Journal of addictions nursing*, 28(1), 34-41.

# Intervention-Cooper Clayton Program ©

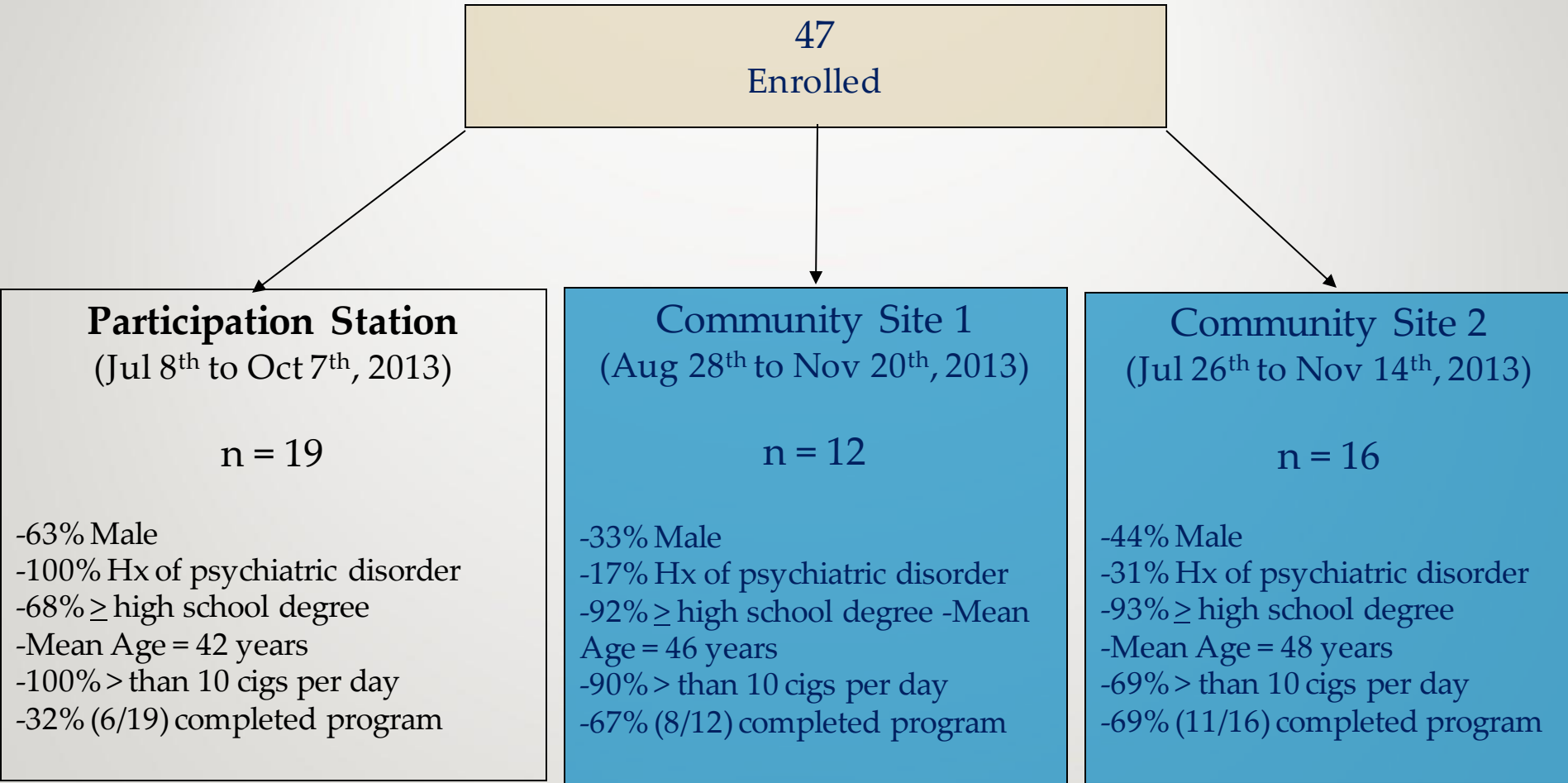
## Behavioral Counseling (13 Wks)

- **Psychoeducation:** On smoking and reaction of body and brain to nicotine replacement therapy
- **Counseling:** On relapse prevention techniques
- **Setting a Quit date\*\*:** Must set quit date by week 5 of program

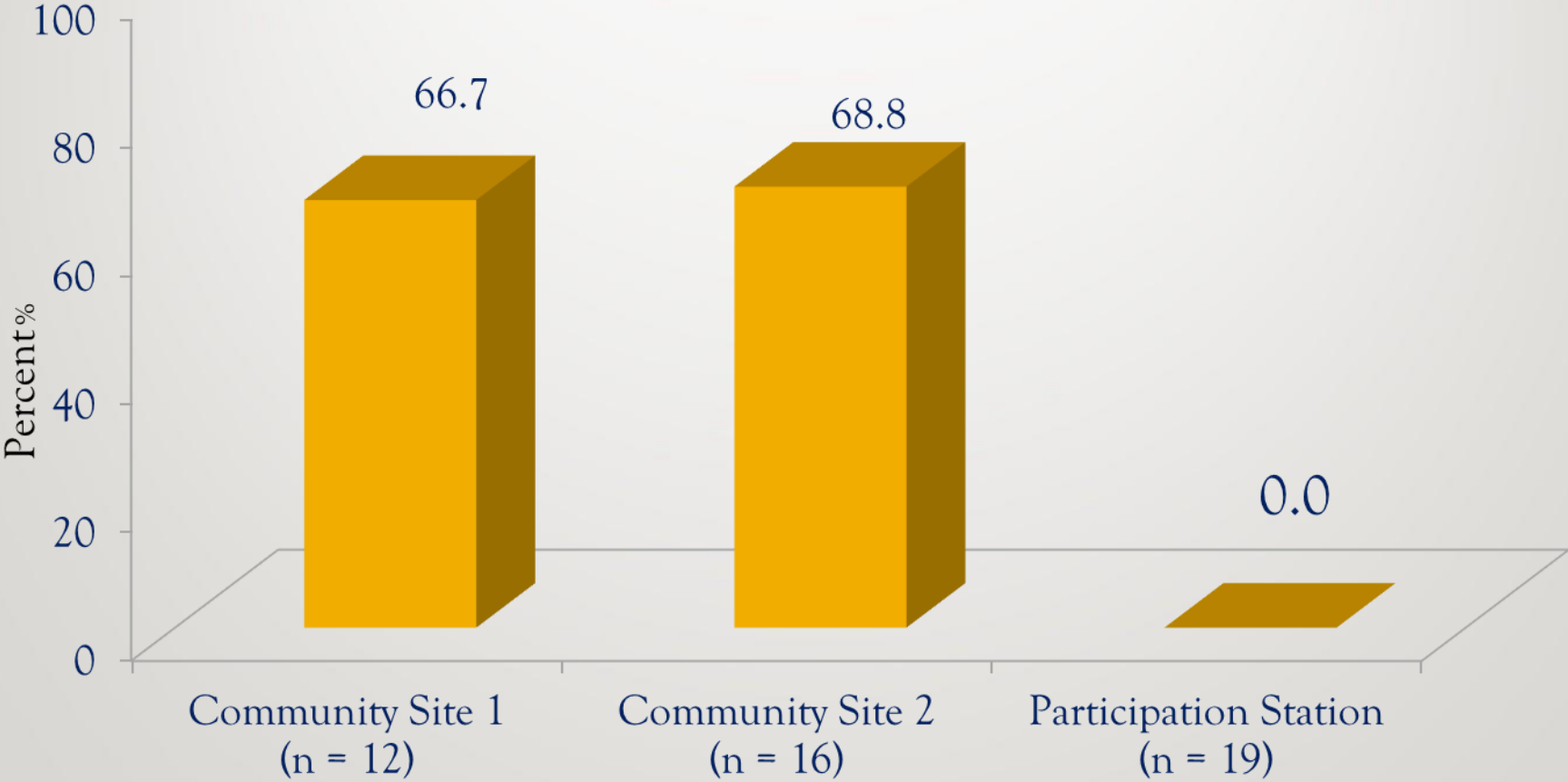


**Nicotine  
Replacement  
Therapy**

# Sample

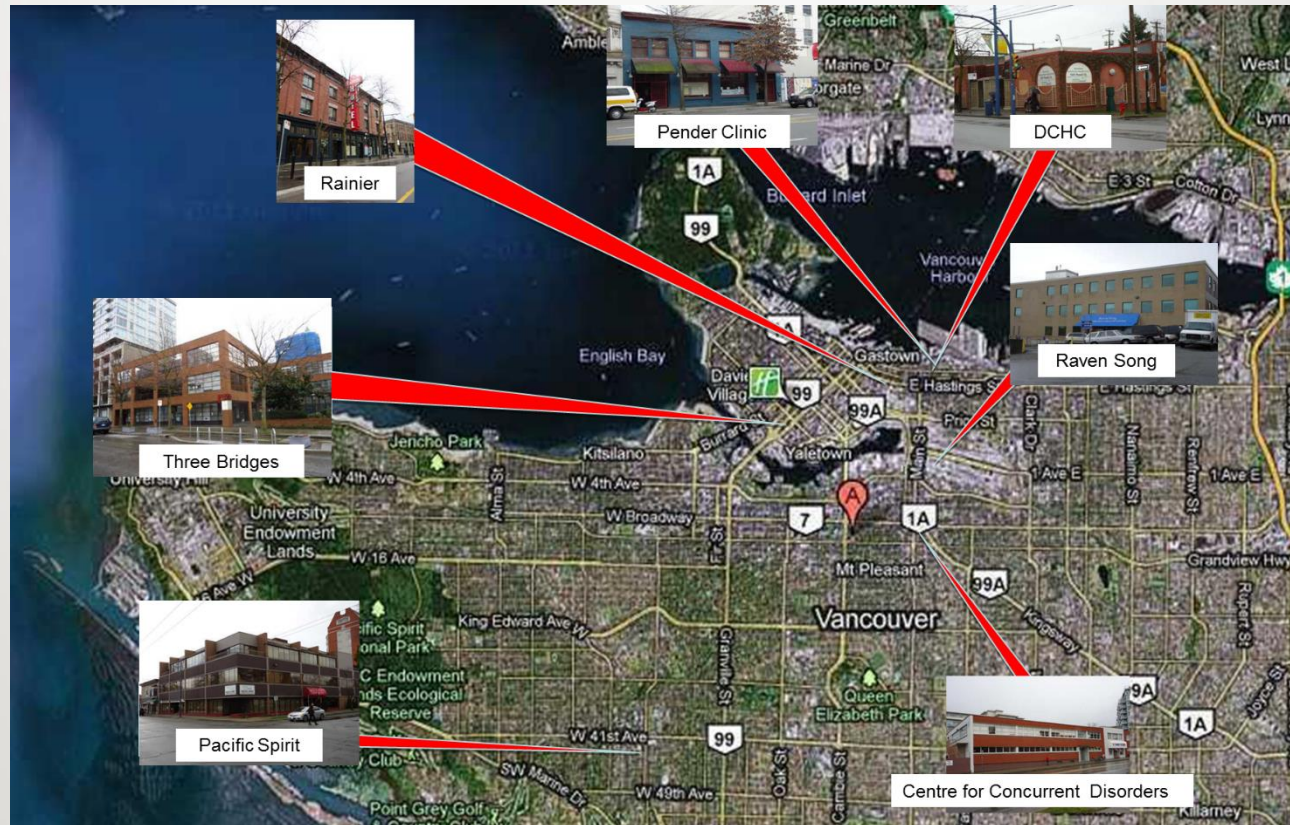


# Smoking cessation outcomes by treatment site (intent-to-treat)



# Tobacco Dependence Clinics,

## Vancouver Coastal Health Authority, British Columbia, Canada

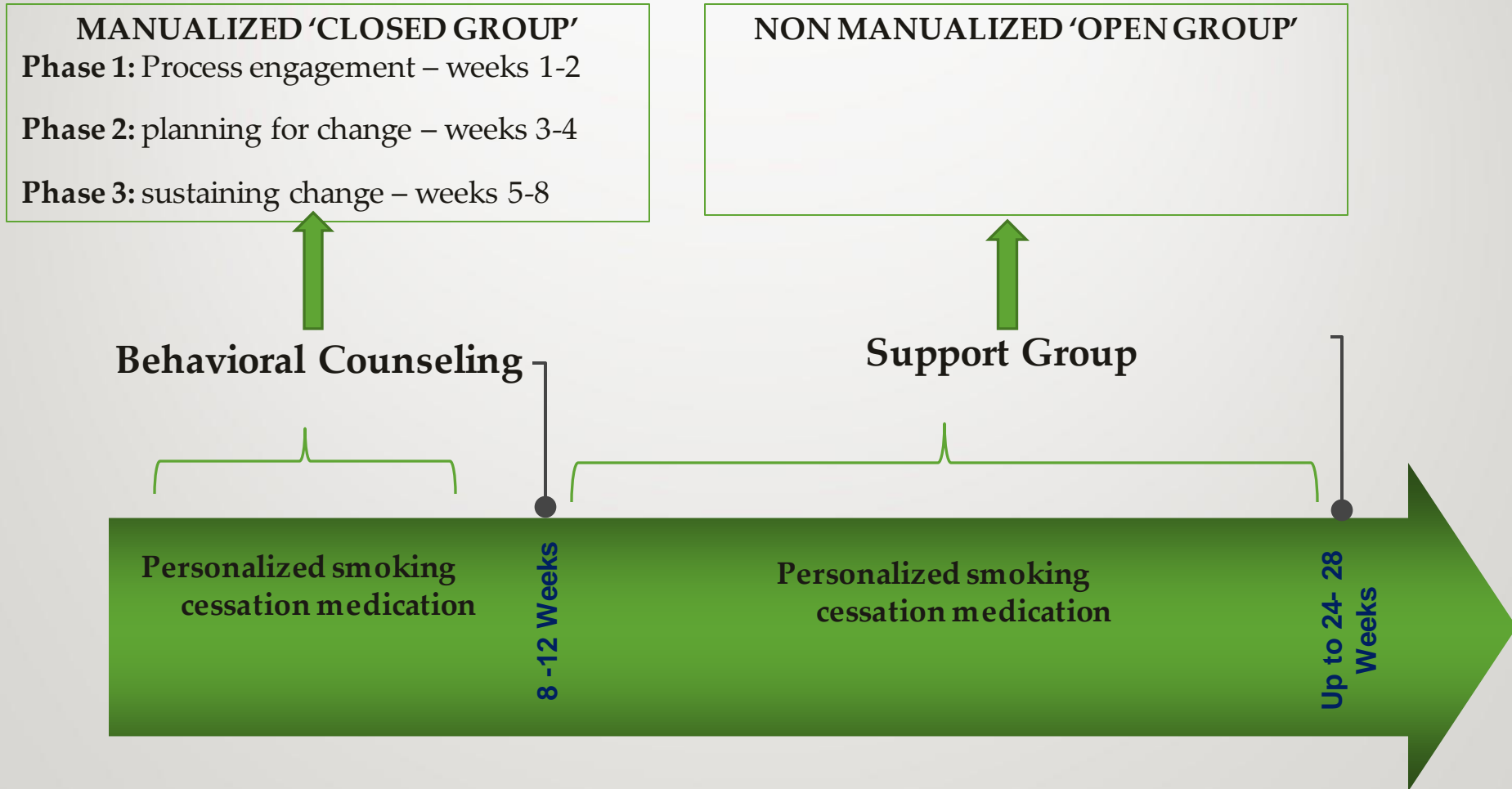


1. Khara, M., & Okoli, C. T. (2011). The Tobacco-Dependence Clinic: Intensive Tobacco-Dependence Treatment in an Addiction Services Outpatient Setting. *The American journal on addictions*, 20(1), 45-55.
2. Okoli, C. T., Anand, V., & Khara, M. (2017). A Retrospective Analysis of the Outcomes of Smoking Cessation Pharmacotherapy Among Persons With Mental Health and Substance Use Disorders. *Journal of Dual Diagnosis*, 13(1), 21-28.

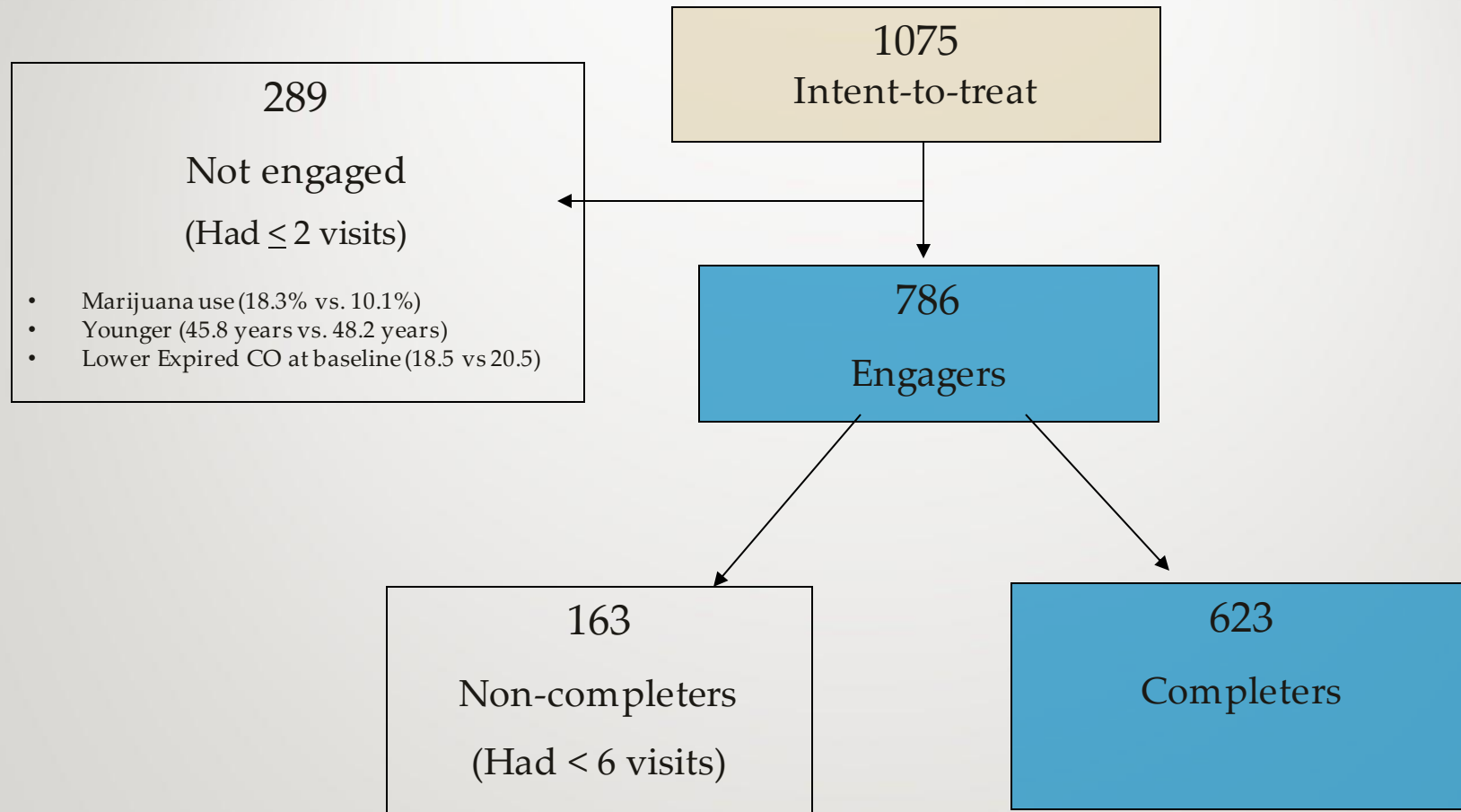
# Treatment Philosophy

- Smoking cessation is a 'process' not an event – as such no specific 'quit date'.
- Concept of 'titration-to-effect' – nicotine replacement is provided in increasing doses until the behavior of smoking ceases.

# Phases of Treatment

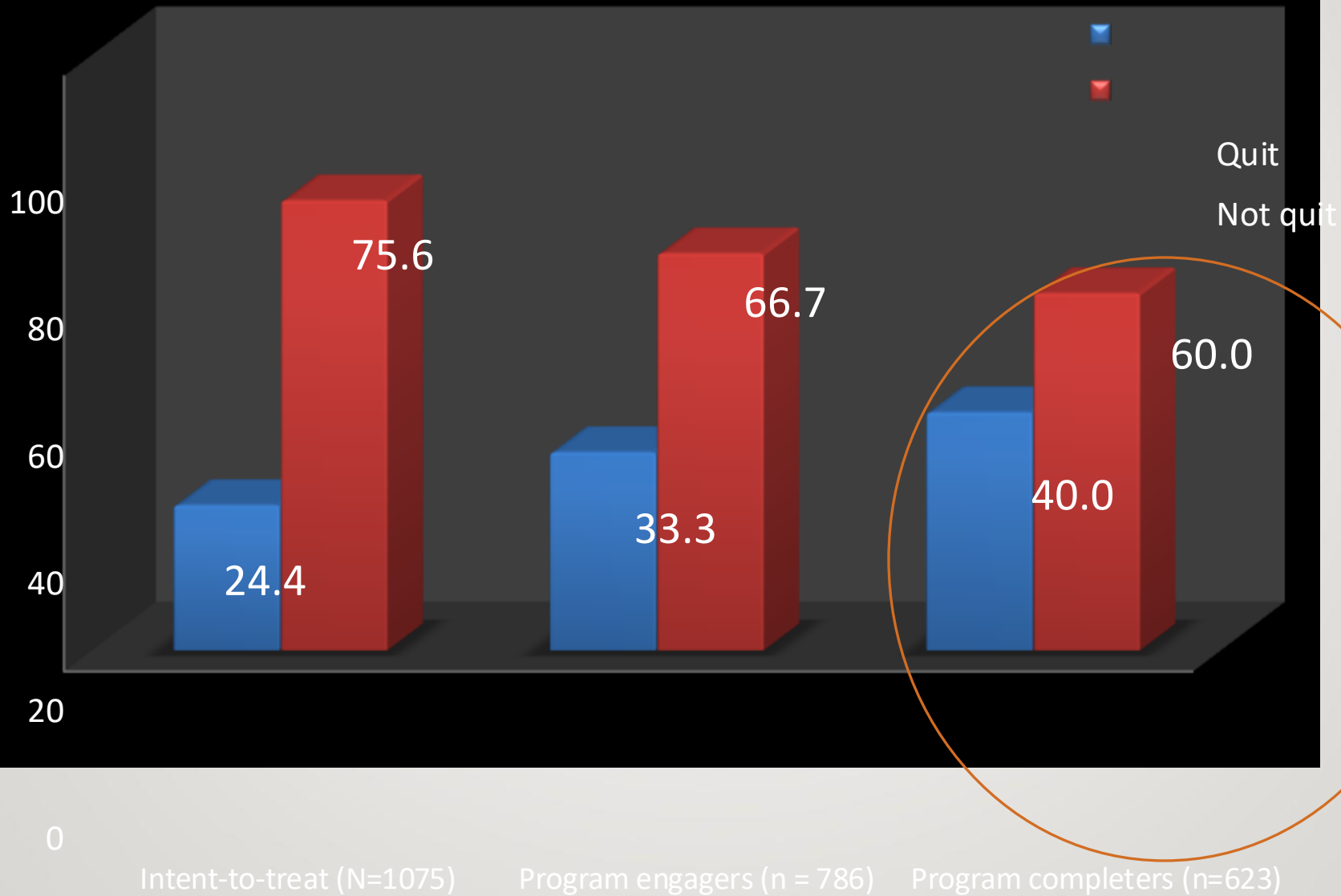


# Sample for evaluation



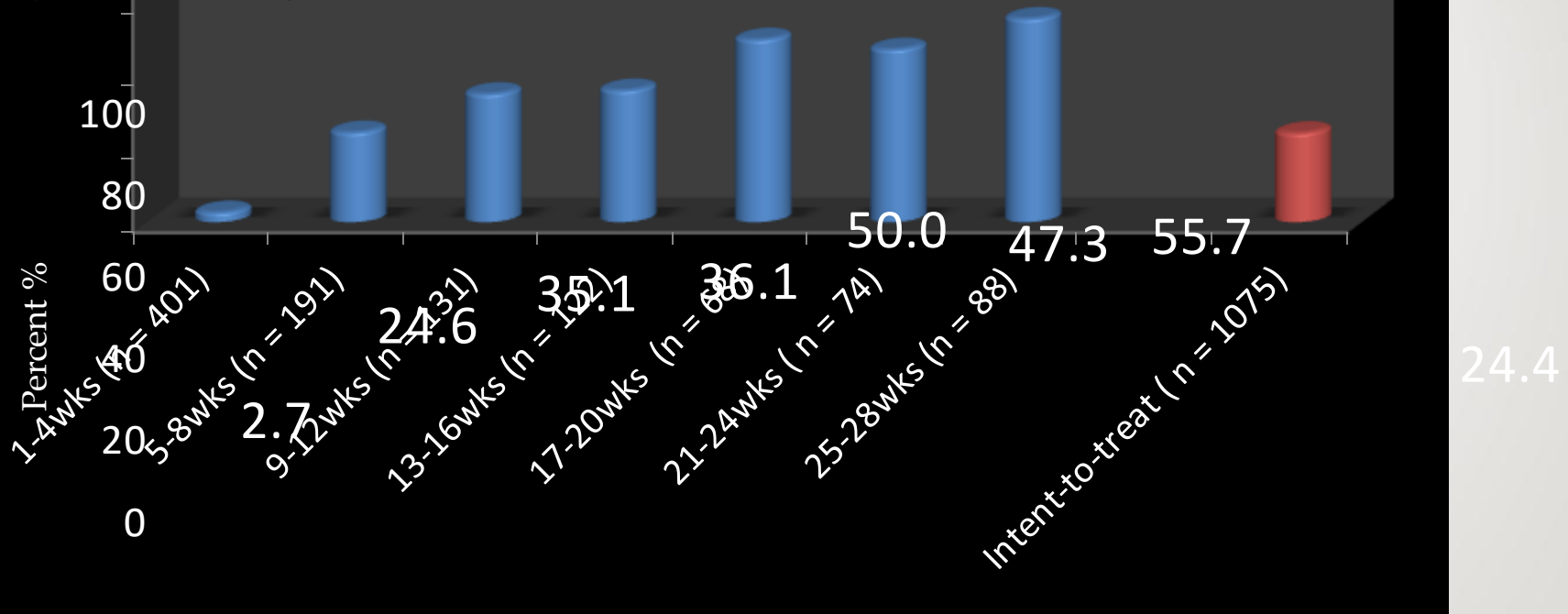
Analysis is based on a retrospective chart review of participants in the Tobacco Dependence Clinic program (between Sept 2007 and Mar, 2012) from 8 clinics, in Vancouver, Canada





\*Smoking cessation at end-of-treatment (i.e., anytime between 8 weeks to 26 weeks) based on 7-day point-prevalence of abstinence verified by expired CO levels

# Smoking Cessation by length of stay in the program (n = 1075)



Statistically significant linear-by-linear associations  $\chi^2=195.7$  (df = 1),  $p < .0001$

# Hospital (Inpatient)-Based Approaches



1. Okoli, C.T., Shelton, C., Khara, M. (in preparation). Predictors of tobacco use among inpatients in a psychiatric hospital
2. Okoli, C.T., Al-Myrazat, Y., Stead, B. (under review). The effect of implementing a tobacco treatment service on adherence to evidence-based practice in an inpatient state-owned psychiatric hospital. *The American Journal on Addictions*
3. Okoli, C. T., Otachi, J. K., Kaewbua, S., Woods, M., & Robertson, H. (2017). Factors Associated With Staff Engagement in Patients' Tobacco Treatment in a State Psychiatric Facility. *Journal of the American Psychiatric Nurses Association*, 1078390317704045.
4. Okoli, C. T., Otachi, J. K., Manuel, A., & Woods, M. (2017). A cross-sectional analysis of factors associated with the intention to engage in tobacco treatment among inpatients in a state psychiatric hospital. *Journal of psychiatric and mental health nursing*.

# ESH Tobacco Treatment Services Approach

Patient identified as a tobacco user at admission

Admitting Physician/APP offers appropriate NRT

Tobacco Treatment Nurse provides follow-up assessment on unit

1. Assesses nicotine withdrawal, motivation to quit, and stage of change
2. Make recommendations to care team for tobacco treatment plan
  - a) Adjustment of tobacco cessation medication
  - b) Attend tobacco dependence education or cessation group (based on SOC)

# Changes in screening for tobacco use and provision of nicotine replacement and practical counseling by 4-month intervals (Sept 2015-Dec 2016)



# ESH Needs Assessment Results (Survey Patients and Providers, 2016-2017)

## Providers (n=195):

- Intention to treat was related to 'subjective norms'
- Likely to ask, not likely to arrange



## Patients (n=115):

- Intention to engage in treatment related to 'subjective norms'
- Often asked, not often 'assisted'



# Conclusions

- Tobacco use is a leading cause of morbidity and mortality for those with MI
- Tobacco users with MI **WANT** to and **CAN** stop using tobacco—they need evidence-based assistance
- In the community (outpatient setting), those with MI often require more intensive treatment (**longer durations** and possibly **higher doses** on medications) to optimize cessation.
- Efforts should be made to promote tobacco treatment **as a normative behavior** within hospital (inpatient) psychiatric settings.
- Direct care staff should be **trained** in evidence-based tobacco treatment, particularly assessing, assisting, and following-up (or referring) tobacco using patients



# BH WELL

Working to promote behavior health and wellness among individuals facing behavioral health challenges.

[www.uky.edu/bhwell](http://www.uky.edu/bhwell)



# Behavioral Health Wellness Environments for Living and Learning (BHWELL) <https://www.uky.edu/bhwell/>



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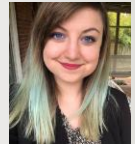
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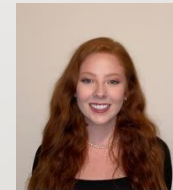


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