

# The Effect of a Nursing-led Tobacco Treatment Service on Nicotine Withdrawal Management at Eastern State Hospital

**Chizimuzo (Zim) Okoli, PhD, MPH, MSN, RN, TTS**

Director of Tobacco Treatment Services and Evidence Based Practice, Eastern State Hospital  
Assistant Professor, University of Kentucky College of Nursing

**Yazan D. Al-Mrayat, MSN, RN**

PhD student, University of Kentucky College of Nursing

**Karen Dailey, LPN**

Eastern State Hospital

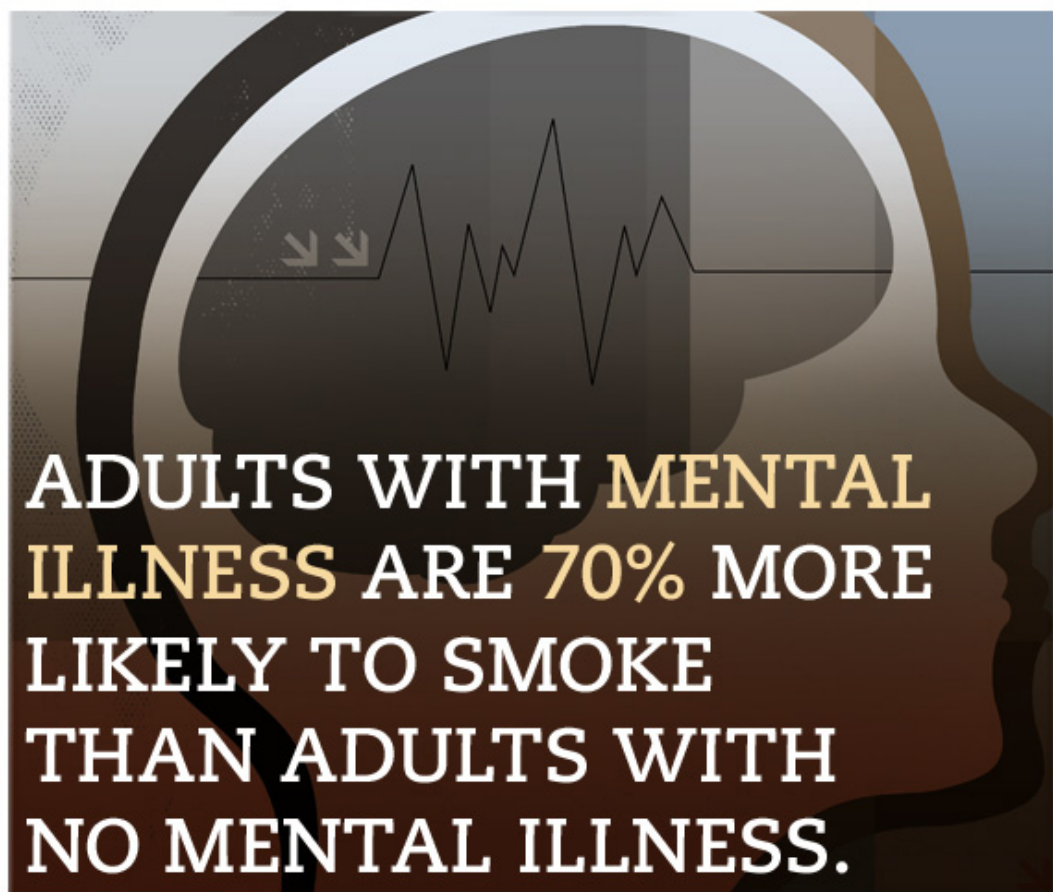


# Objectives

1. Describe the significance of tobacco use and mental illness
2. Explain evidence-based guidelines for addressing tobacco use
3. Describe the Tobacco Treatment Services (TTS) at ESH
4. Discuss nicotine withdrawal management outcomes of the TTS



# Significance



**Vital**<sup>CDC</sup>signs™  
[www.cdc.gov/vitalsigns](http://www.cdc.gov/vitalsigns)

# Adverse effects of smoking among persons with mental illness

## **Smokers with Mental illness :**

- 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 Mental illness :**

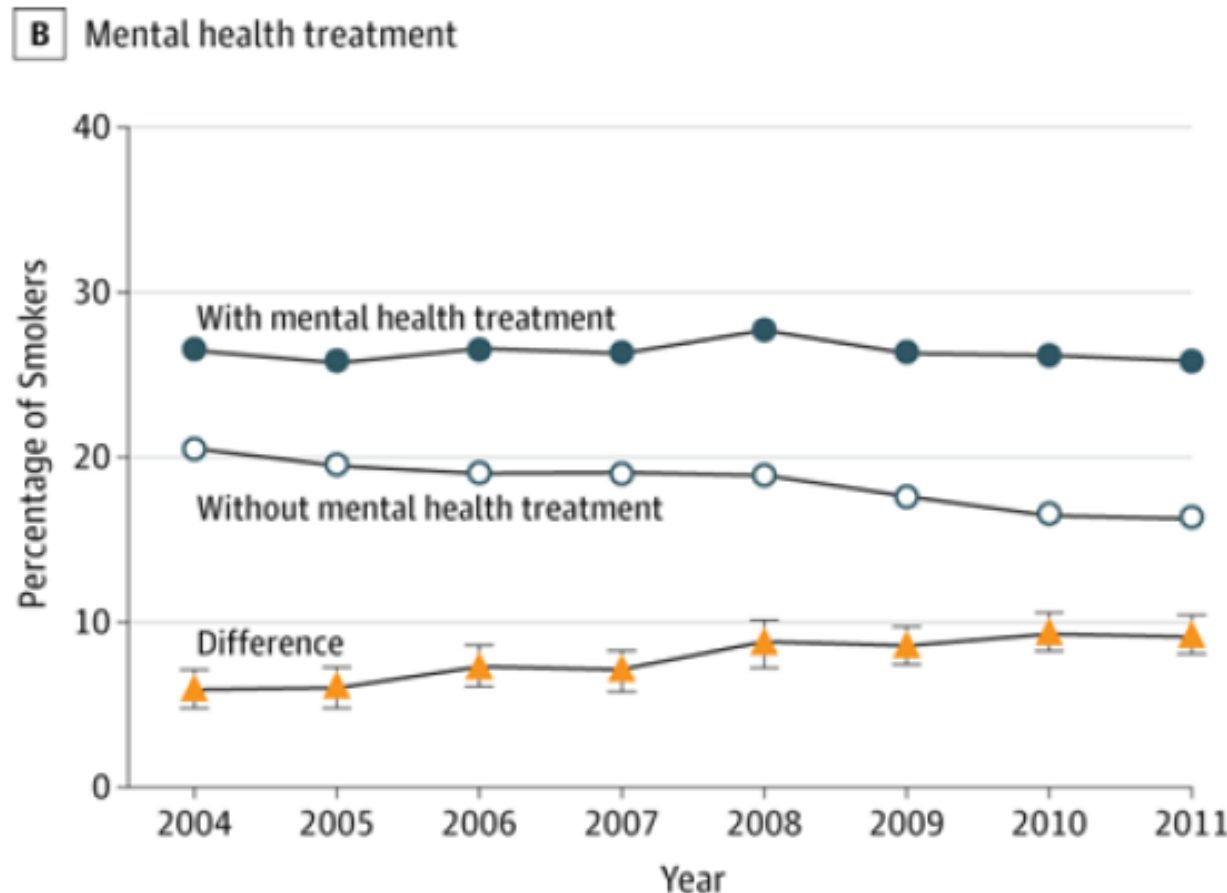
- Have better health
- Live longer
- Need less medication
- Have less depression
- Save more money

## **Smoking keeps consumers from achieving recovery:**

- Reduces financial stability
- Decreases opportunities for jobs
- Decreases ability to secure housing



# Trends in smoking prevalence by mental health treatment status over time (2004 to 2011)



*“This suggests that tobacco control policies and cessation interventions targeting the general population have not worked as effectively for persons with mental illness.”*

(SOURCE: 2004-2011 Medical Expenditure Panel Survey [MEPS])

# Clinical Practice Guidelines: Assessments and Intervention Planning

“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)*



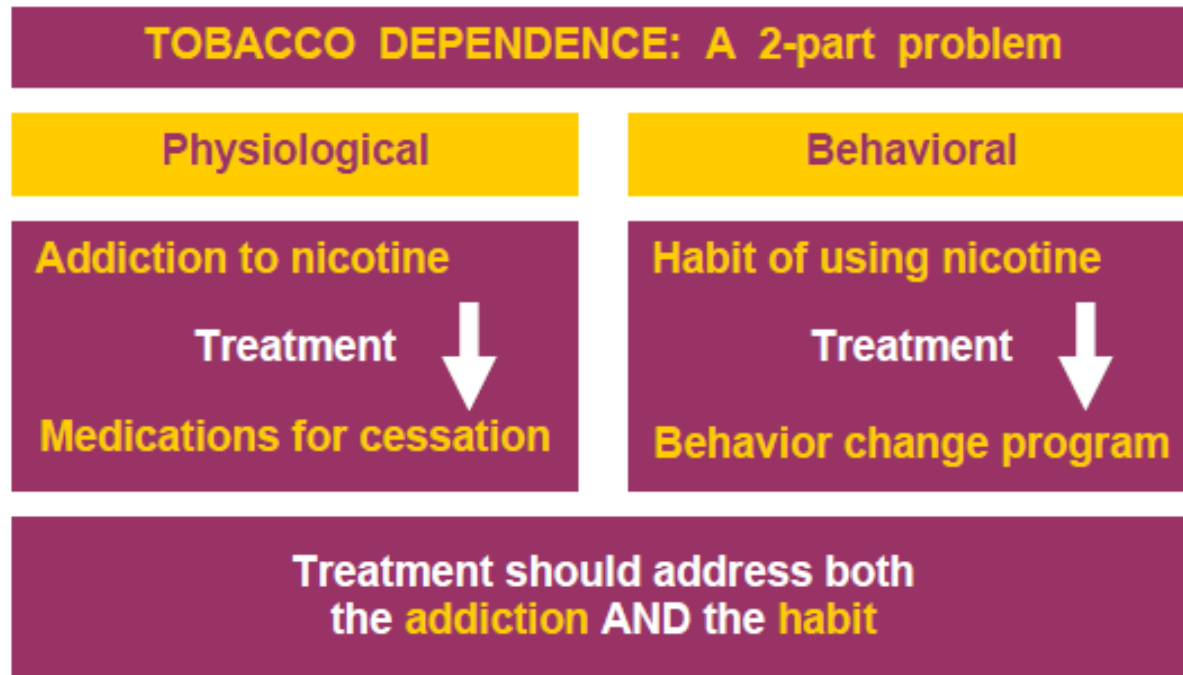
# CDC Recommendations for behavioral health settings

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- ✓ ☐ 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% smoke-free
- ✓ ☐ Including quitting treatment as part of mental health treatment and wellness

# Basic Assumption in Tobacco Dependence Treatment

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Adapted from: *Tobacco Free for Recovery: Assisting Mental Health Consumers with Tobacco Cessations: Training*. Rx for Change, San Francisco, CA.

# Encourage Use of Pharmacotherapy



Patch



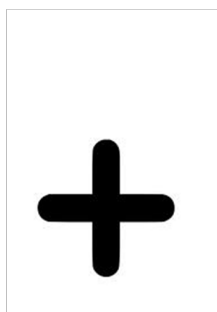
Gum



Lozenge



Inhaler



Zyban



Chantix

## Oral Medications

- Every smoker should be encouraged to use smoking cessation medications (with the exception of special circumstances like pregnancy)
- Clinicians should explain how medications:
  - increase smoking cessation success
  - Reduce withdrawal symptoms
- Because individuals with MI are more nicotine dependent, consider individualizing medications by:
  - Higher dosages
  - Longer durations
  - combinations

## Nicotine Replacement Therapy

# Tobacco Dependence Treatment vs. Nicotine Withdrawal Management



## Tobacco use treatment

**Goal:** To address tobacco use disorder

**Approach:** Behavioral therapy + Pharmacotherapy

(Using 5 A's model)

### Assessments:

- Tobacco use history
- Motivation to quit & Stage of Change
- Prior use of tobacco dependence pharmacotherapy

## Nicotine Withdrawal Management

**Goal:** To minimize discomfort while in the hospital

**Approach:** Pharmacotherapy & craving minimization

### Assessment:

- Tobacco use frequency & amount
- Minnesota Nicotine Withdrawal Scale

# Nicotine Replacement for Tobacco users

TOBACCO PRODUCT	NICOTINE REPLACEMENT
<b>CIGARETTES</b>	
2 packs day or greater	42mg
1 pack day	21mg
Half pack day	14mg
Less than 5 cigs/day	2mg gum or lozenge PRN)
<b>SNUFF</b>	
3 can/week	42 mg
2/3 cans/week or 1 can day	21mg
Less than 2 cans/week	14mg
<b>CIGARS</b>	
1-2/day	21mg

# ESH Tobacco Treatment Services

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# Tobacco Treatment Services Flow Chart

Patient identified as a tobacco user at admission



Admitting Physician/APP orders appropriate NRT



Tobacco Treatment Clinic 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 stage of change)



Tobacco Treatment Clinic provides individual or group classes

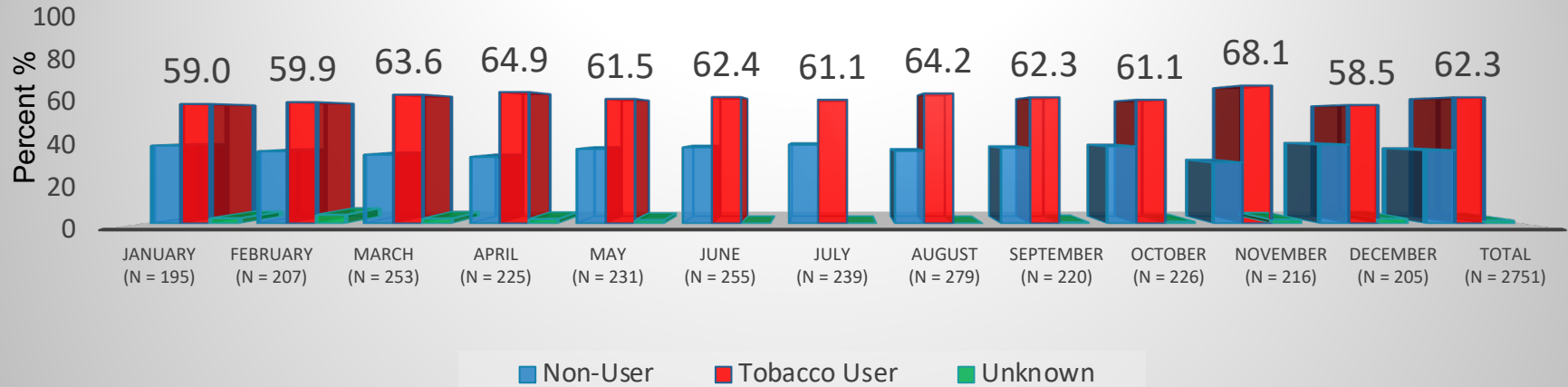
1. 30 min tobacco education (For Pre-contemplation and Contemplation stages)
2. 30 min tobacco cessation groups (For Preparation, Action, and Maintenance)
3. Provide referrals to tobacco treatment programs (e.g., KY quitline)



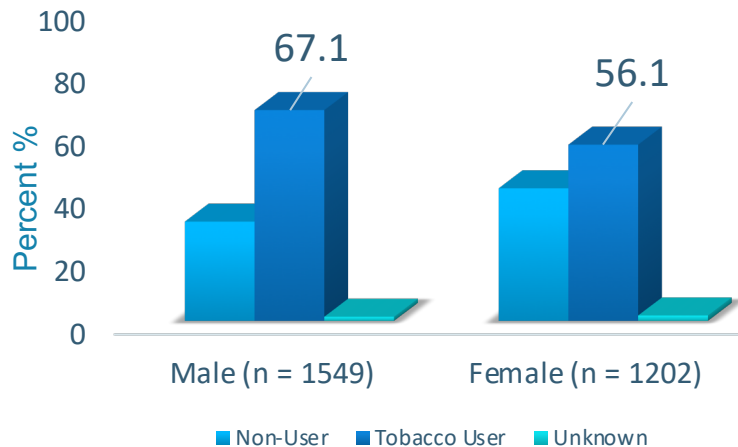
Attending Physician/APP orders medication at discharge as appropriate

# Screening of Tobacco Use Among Patients

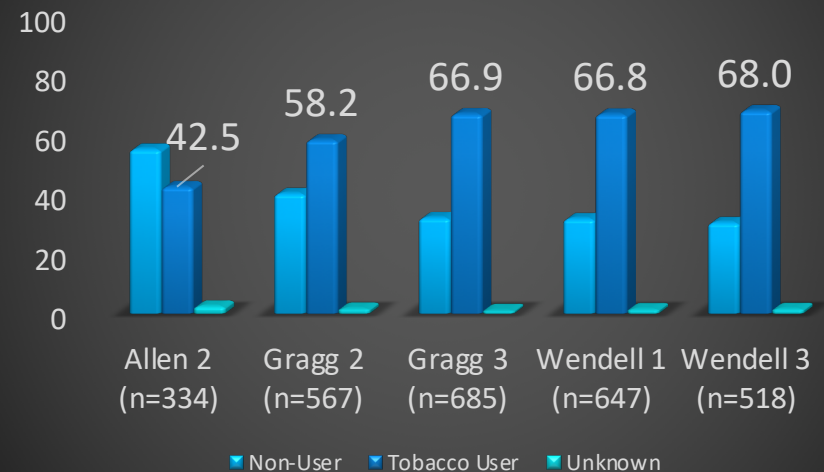
**Tobacco Use Status at Admission (January to Dec, 2016)**



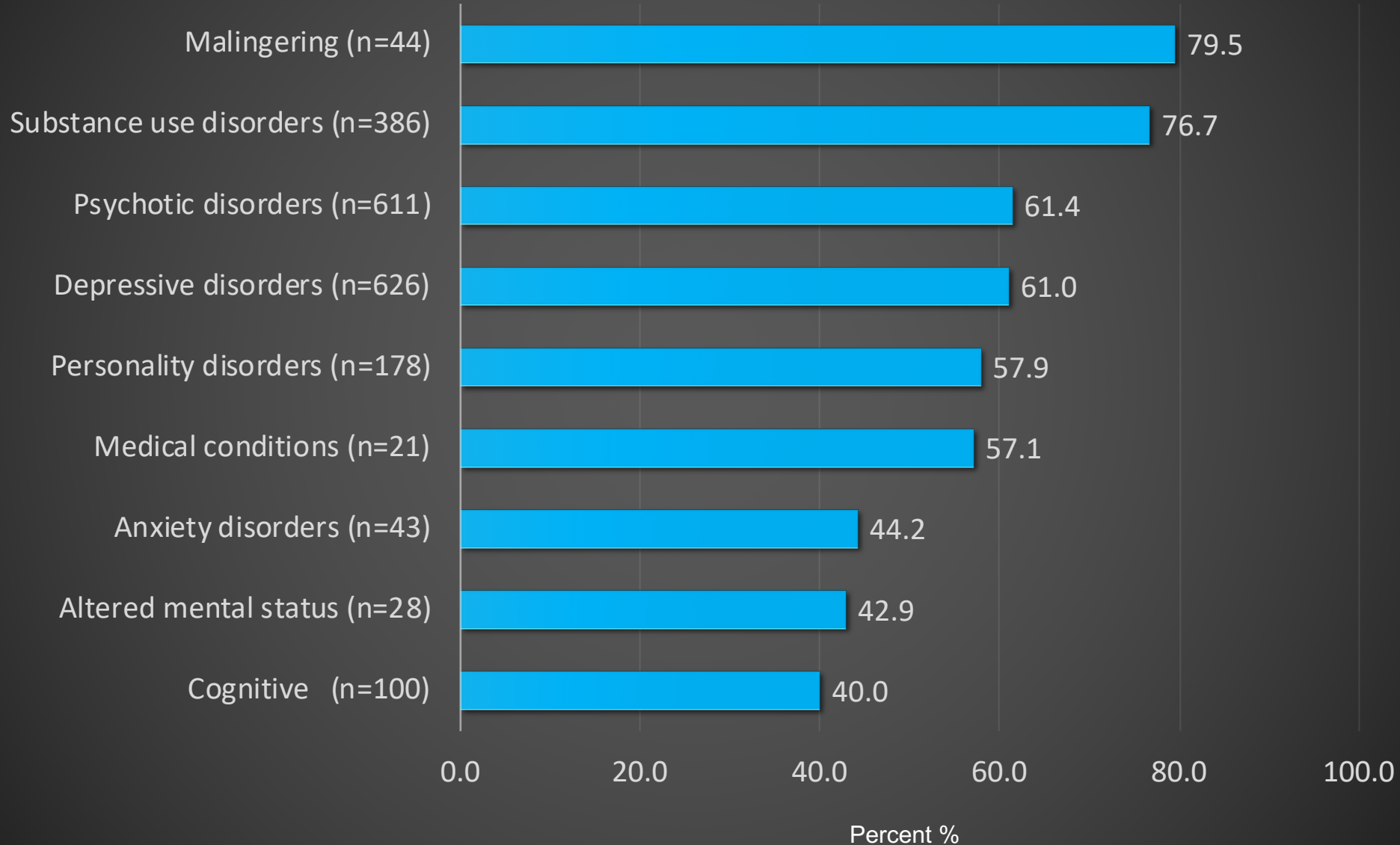
**Tobacco Use by Gender (N = 2751)**



**Tobacco Use by Unit (N = 2751)**

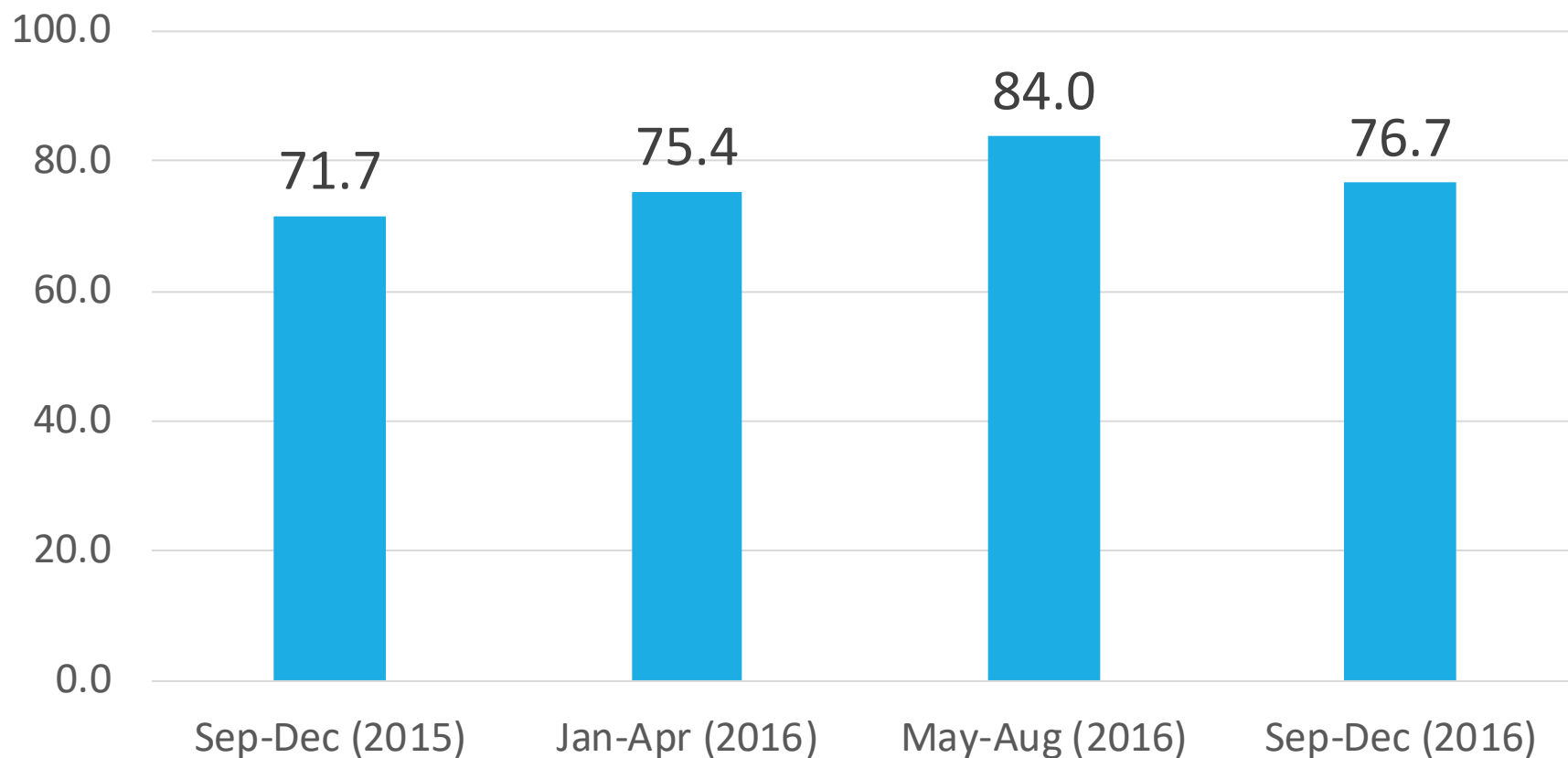


# Tobacco Use by Diagnosis(n = 2037)



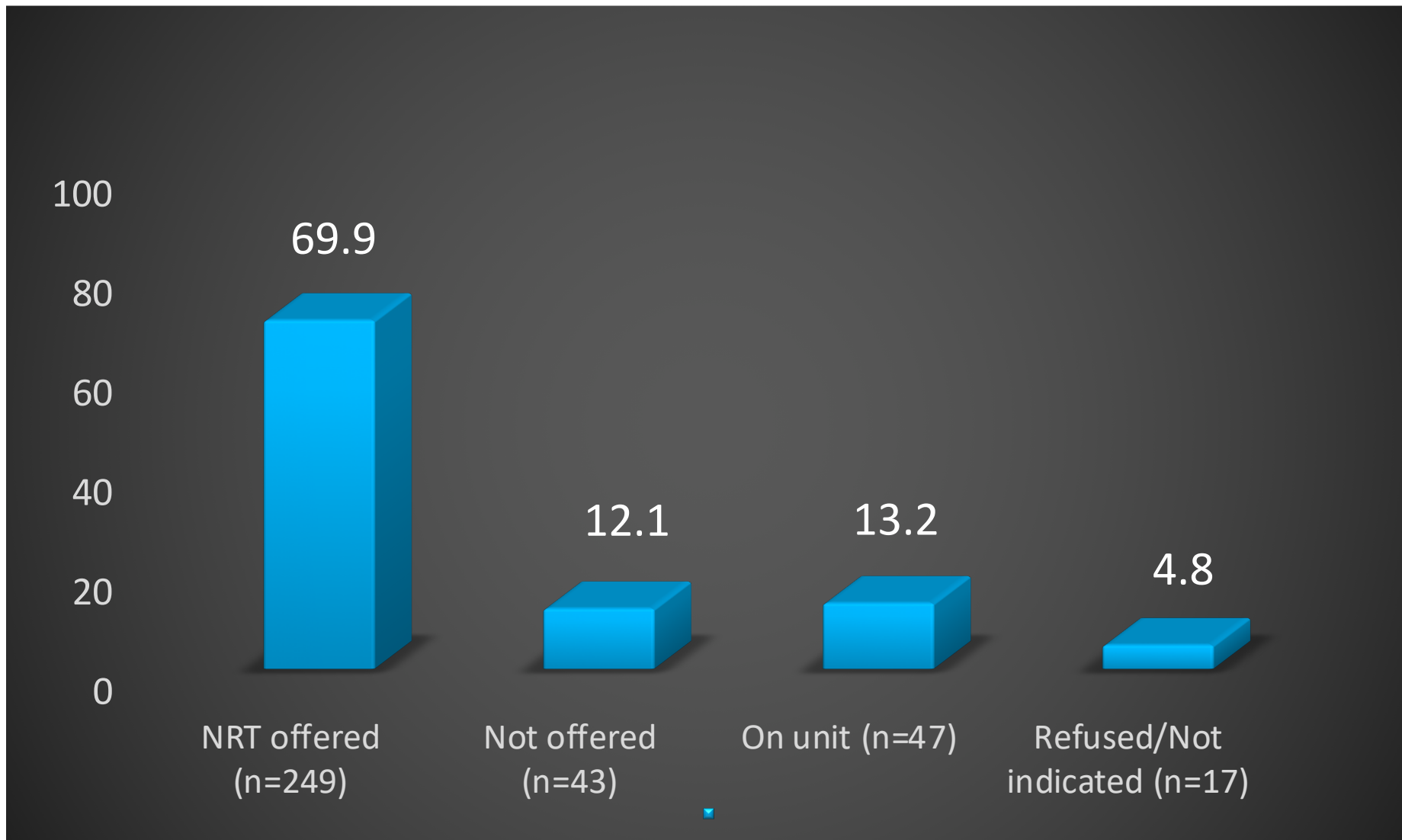
\*Diagnosis is based on discharge diagnosis from ICD-10 classification (repeat admissions not included in analysis)

# Changes in offering NRT by 4-month intervals (Sept 2015 to Dec 2016)



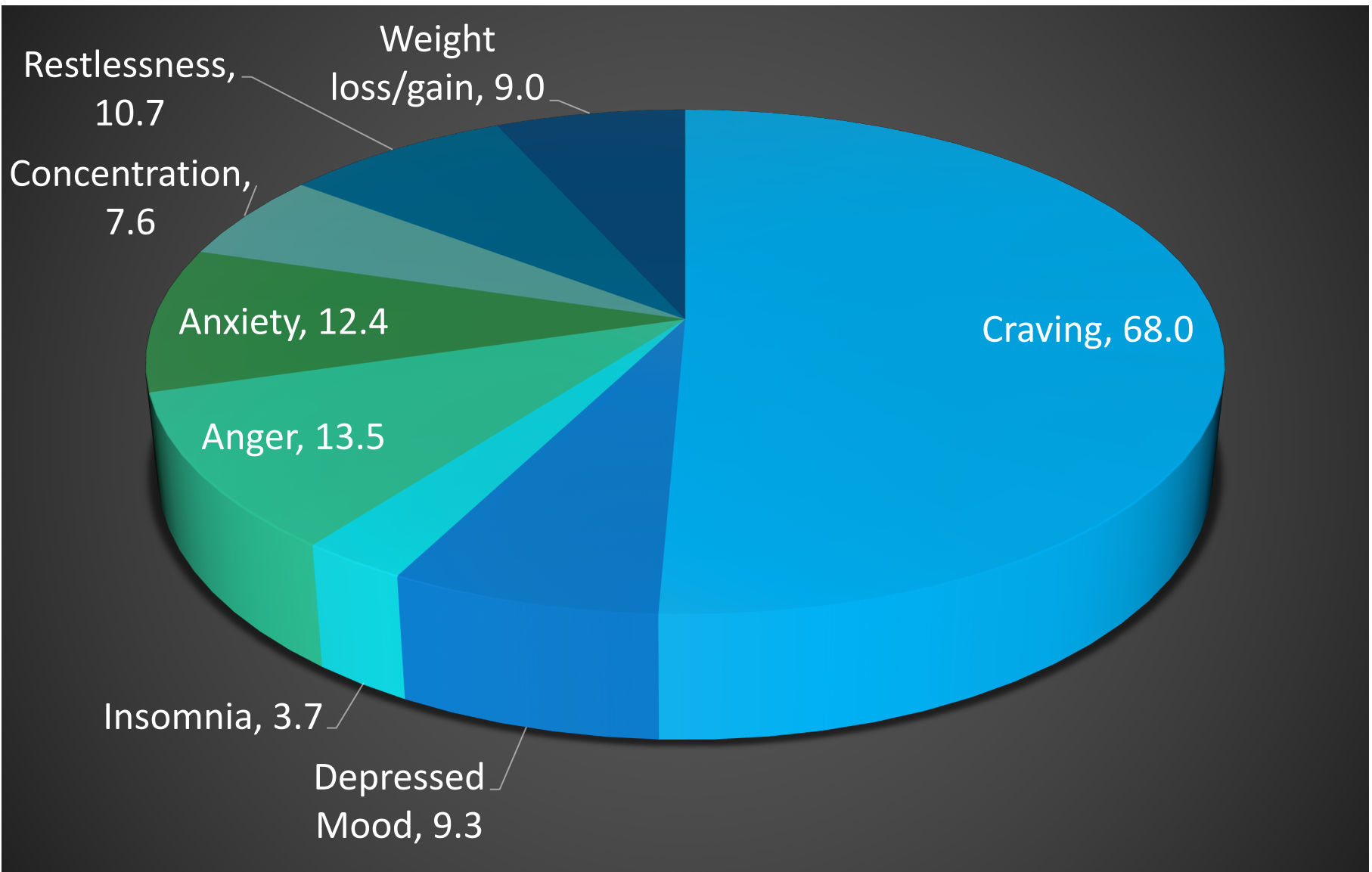
\*Significant increases in offering NRT by 4-month intervals using Linear trend analysis with ANOVA

# Nicotine patch offered at admission among those assessed for nicotine withdrawal (n = 356)



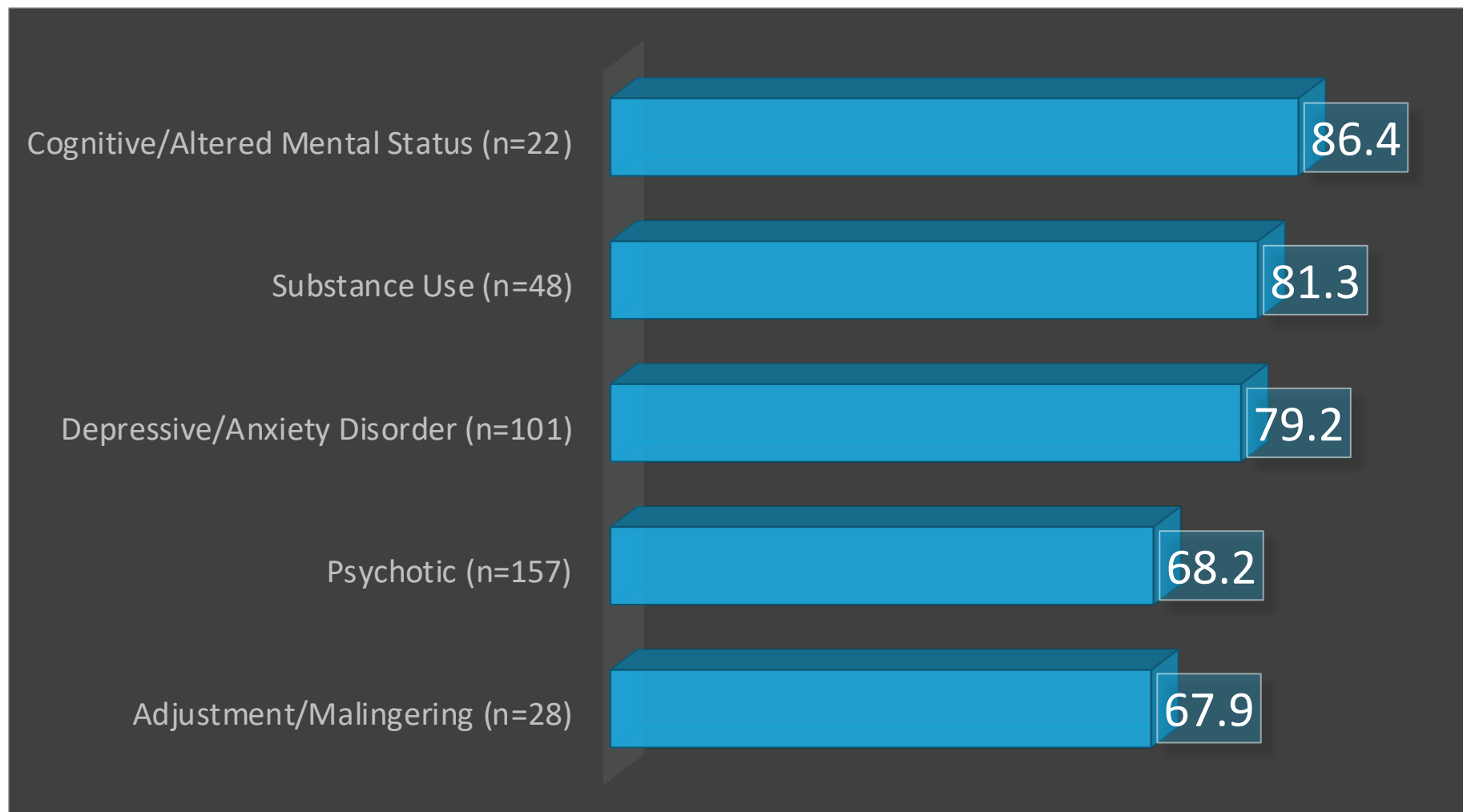
\*No significant differences by diagnosis using chi-square analysis

# Frequency of nicotine withdrawal symptoms\* (n = 356)



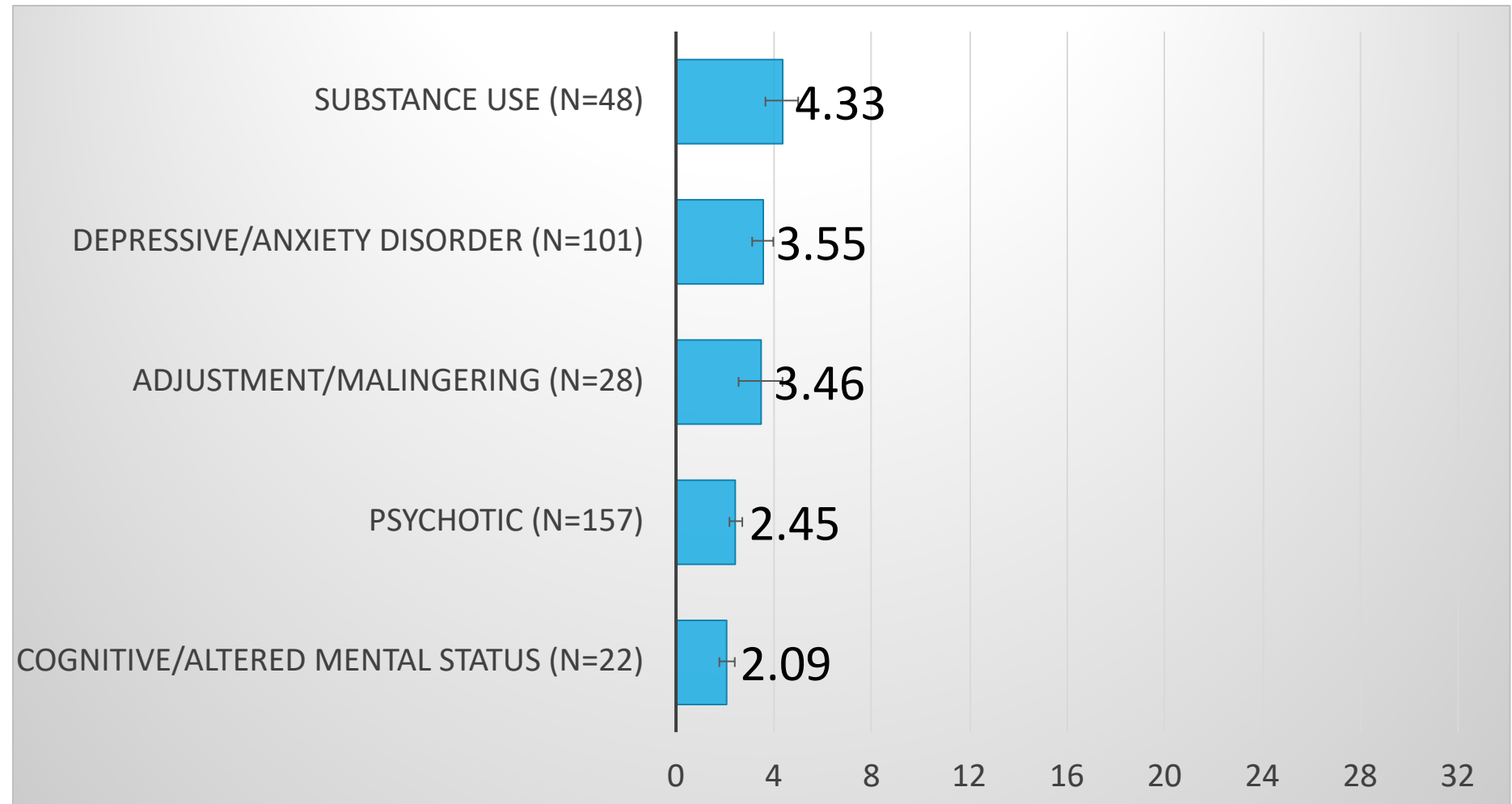
\*Based on the Minnesota Nicotine Withdrawal Scale, an 8-Item questionnaire that assesses severity of nicotine withdrawal. Hughes JR, Hatsukami D. Signs and symptoms of tobacco withdrawal. Archives of General Psychiatry. 1986;43:289–294

# Reporting any Nicotine Withdrawal Symptom by Diagnosis (n = 356)



\*No significant differences by diagnosis using chi-square analysis ( $p=.09$ )

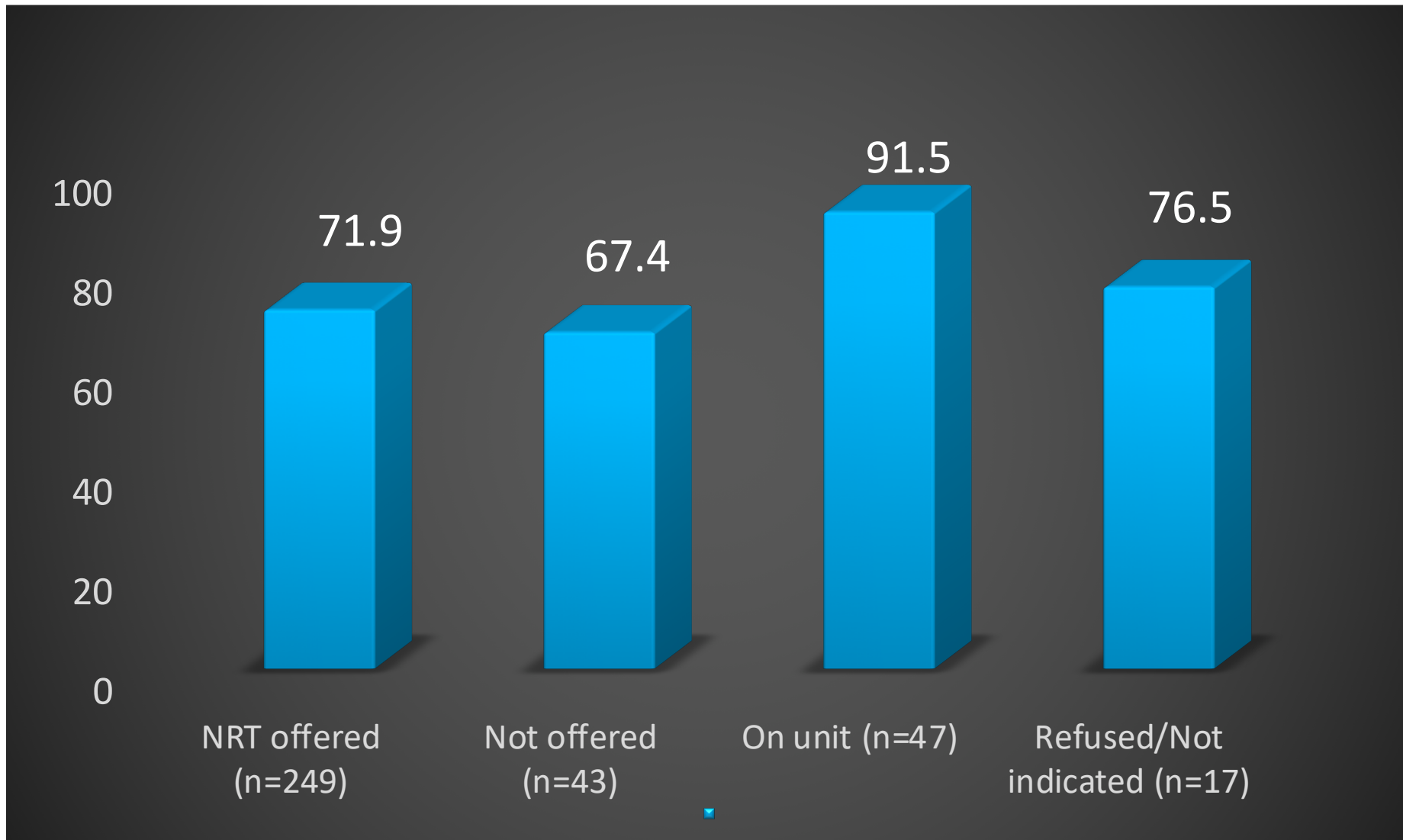
# Intensity of nicotine withdrawal symptom scores by diagnosis (n = 356, Mean=3.07, SD=3.91)



\*Significant differences by diagnoses using Kruskal-Wallis Test ( $p=.005$ )

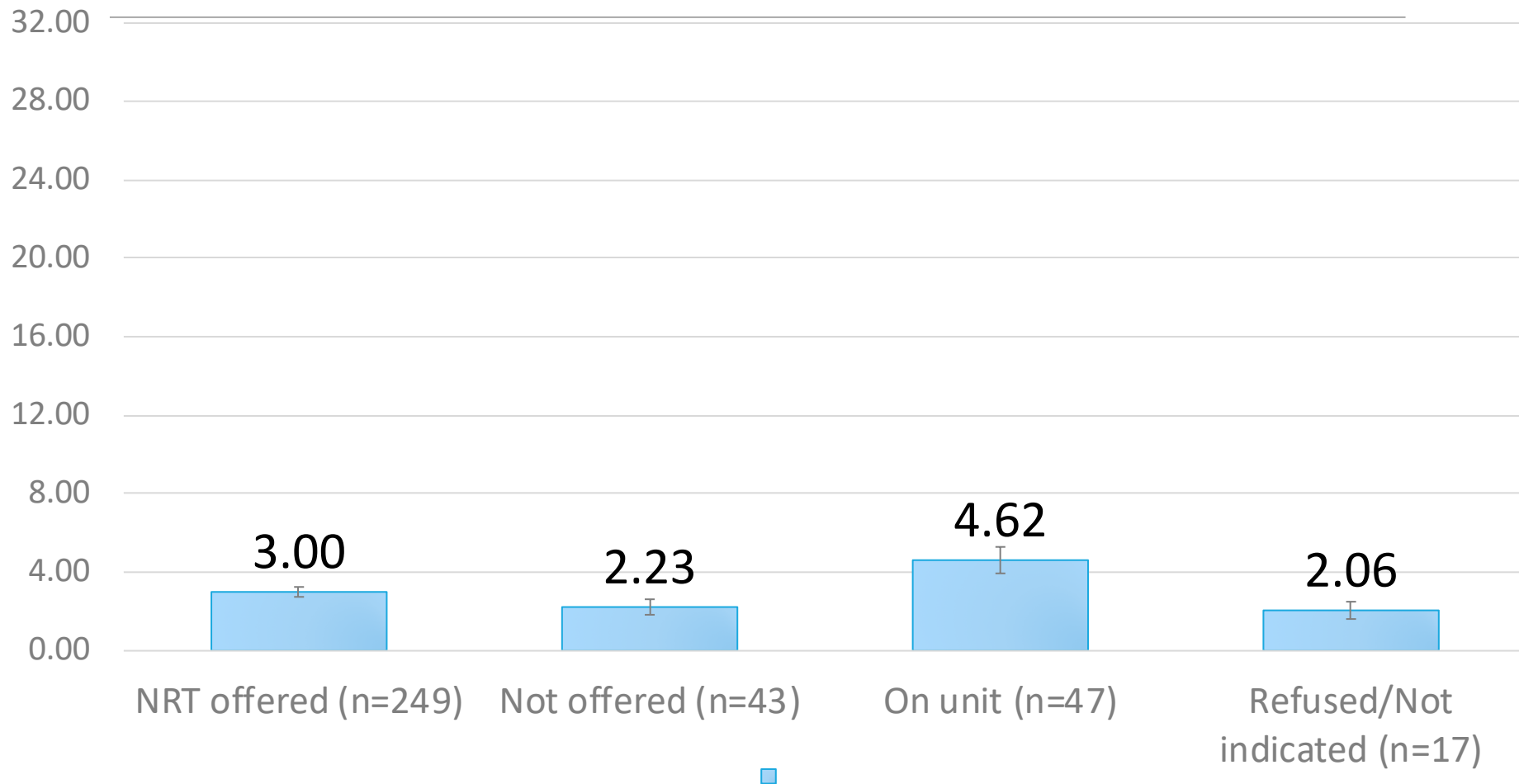


# Any nicotine withdrawal by receiving NRT at admission (n = 356)



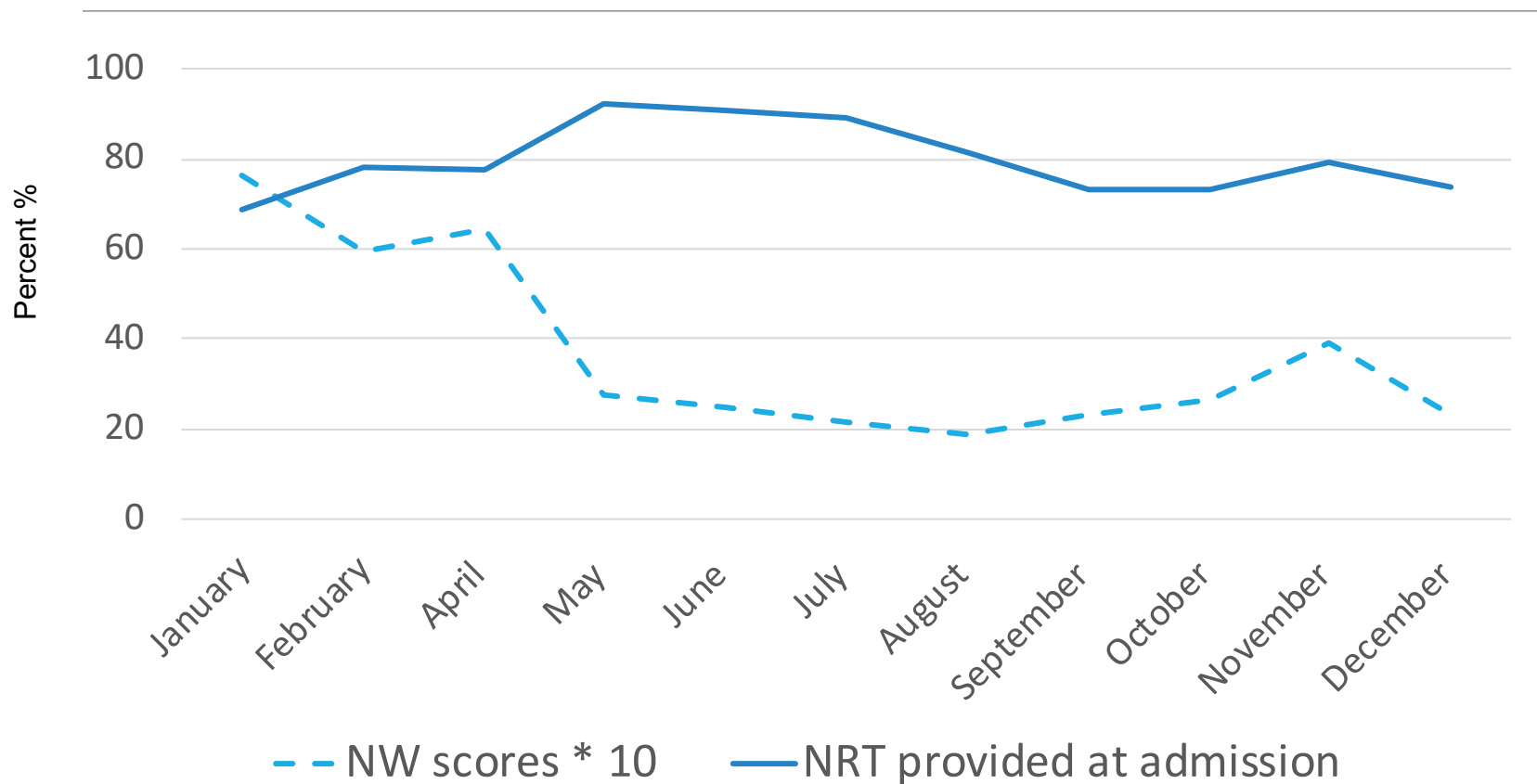
\*Significant group differences using chi-square analysis (p=.028)

# Intensity of nicotine withdrawal by receiving NRT at admission (n = 356, Mean=3.07, SD=3.91)



\*Significant group differences using ANOVA ( $p=.014$ )

# Changes in nicotine withdrawal intensity with NRT provided at admission by months



\* For this graph, the nicotine withdrawal scores were multiplied by 10 to create a rate of intensity scores.

# Conclusions

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- Significant tobacco use at ESH (62.3% vs. 29.6% in Kentucky)
- High reporting of any nicotine withdrawal symptoms (74.2%, most prevalent is craving)
  - But low intensity of withdrawal (Mean=3.07  $\pm$  3.91)
- Those with substance use disorders have the highest intensity of withdrawal
- Those for whom the nicotine patch is delayed (on unit) have the highest reporting of and intensity of withdrawal
- Increasing patch administration is associated with decreased nicotine withdrawal intensity scores over time

# Implications

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- Need for best practices in documenting tobacco use and offering all tobacco users nicotine replacement therapy during tobacco-free hospitalizations
- Nursing-led tobacco treatment results in better management of withdrawal
- Services may be expanded beyond ESH to other setting throughout the UK Healthcare enterprise

# Future Research

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- Examine psychometric properties of the Minnesota Nicotine Withdrawal Scale for psychiatric patients
  - Determine sensitivity and specificity to nicotine withdrawal
- Examine the effectiveness of other tobacco cessation medications (e.g., varenicline or bupropion) in managing nicotine withdrawal
- Examine the effects of nicotine withdrawal management on motivation for tobacco use treatment at discharge

# QUESTIONS?

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