

**POWER TO QUIT:  
A Randomized Clinical Trial  
To Encourage Smoking Abstinence  
Among Person's Experiencing  
Homelessness**

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# Scientific Team

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# PTQ Team



# Disclosure

- **Funding Sources - NIH funded R01**
  - **National Heart Lung and Blood Institute (NHLBI) 5R01HL081522**
  - **Competitive Renewal**
- **Industry funding - None**
- **Off label medication use - None**

# Background

- **Cigarette smoking remains the largest preventable cause of death and disease**
- **Responsible for more than 480,000 Americans each year**
- **Current adult cigarette smokers rates:**
  - **US Adults: 15.1% (36.5 million)**
  - **Daily Smokers: 75.7% (27.6 million)**
  - **Non Daily Smokers: 24.3% (8.9 million)**
- **Decline smoking prevalence in general population yet rates are highest among underserved population**

# Homelessness

- **3 million people every year in USA**
- **Minnesota = 9,312 homeless people (2015), ↓ 9% (2012)**
- **They have family physicians**
- **Primary care clinics within shelter**

# Homelessness and Smoking

- Smoking prevalence in homeless is **>70%**
- 2/3 leading causes of death is related to smoking cigarettes
- “Hard to reach and retain” : not included in cessation trials
- Interested in smoking cessation and quit attempts
  - Readiness to quit in next 6 months = **40%**
  - Tried to quit at least once in last year = **72%**

# Challenges

- **Most trials exclude the homeless because stable housing is an inclusion criteria**
- **Concerns about low adherence to intervention efforts**
  - **Competing basic needs**
  - **Chemical health**
  - **Comorbid health concerns**
  - **Comorbid psychiatric conditions**



# Pilot Study

- **Funded by the American Lung Association (Okuyemi, PI)**
- **28 Homeless Smokers**
- **7 patches/week use recommended**
- **MI was shown to be a feasible and acceptable intervention**

## **Week 26 – quit rate based on patch use**

<b>Patches/ Week</b>	<b>Quit Rate</b>
4 or more	33.3%
Less than 4	10.5%

# Power to Quit (PTQ)

- **5 year RCT with 2 arms (N = 430)**
- **Promote smoking cessation among persons experiencing homelessness**
- **The primary aim of this study was to evaluate the impact of motivational interviewing (MI) targeting NRT adherence VS. Brief advice on smoking cessation**

# Outcomes

Primary outcome:

Cotinine-verified 7-day point-prevalence abstinence at 6 months.

Secondary outcome:

Adherence to nicotine patch assessed through direct observation and patch counts.

Tertiary outcomes:

Mediating and/or moderating effects of comorbid psychiatric and substance use

# Methods

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# Inclusion Criteria

- **Currently Homeless**
- **Smokes at least 1 cigarettes past week**
- **Smoked at least 100 cigarettes in lifetime**
- **Willing to use NRT for 8 weeks**
- **Willing to attend counseling sessions**
- **Aged 18 years or older**

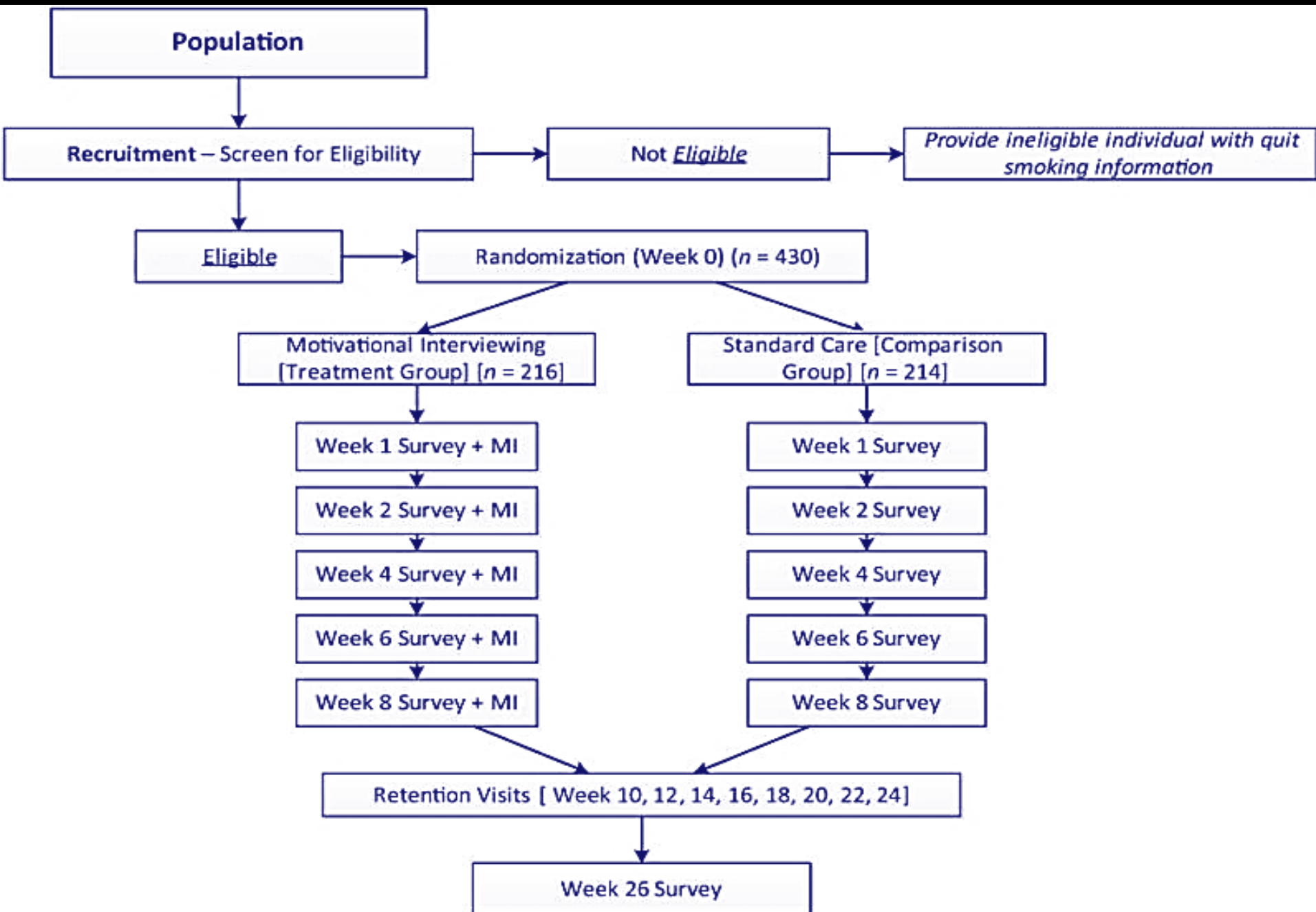
# Exclusion Criteria

- **Pregnancy**
- **Smoking status confirmed with exhaled CO cutoff 5ppm**
- **Use of other tobacco cessation aid in last 30 days**
- **Unstable medical illness within the prior month**
- **Suicidal ideation in the last 14 days**
- **Severe Cognitive impairment**
- **>5 Score on psychotic symptoms( 9 item MINI)**

# Intervention

<b>Intervention</b>	<b>Standard Care</b>	<b>Motivational Interview</b>
<b>Counseling</b>	<b>1 X Standard Care Counseling</b>	<b>5X Weekly Motivational Interview Counseling</b>
<b>Self administered medication</b>	<b>8 Weeks 21 mg NRT</b>	<b>8 Weeks 21 mg NRT</b>

# Design





# Retention Initiatives

- 15 visits = \$275 USD
- T-shirts / Sweat shirts
- Calendars
- Water Bottles
- Back Massagers
- Playing Cards
- Tote Bags
- Visa Cards
- Bus Tokens



# Results

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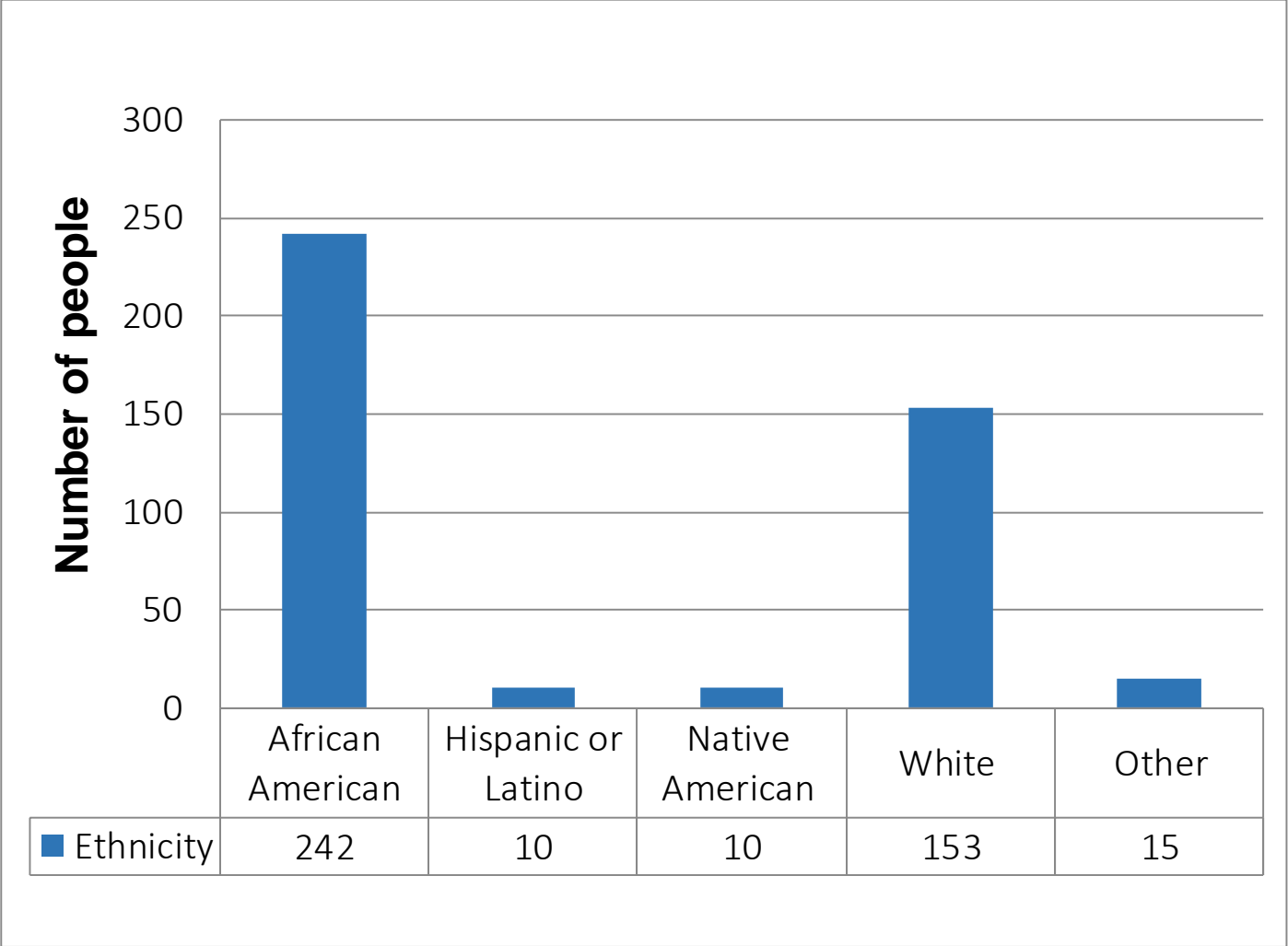
# Enrollment

<b>Completed Eligibility Survey</b>	<b>839</b>
<b>Ineligible</b>	<b>271</b>
<b>Eligible</b>	<b>568 (67.7%)</b>
<b>Eligible but missed appointment</b>	<b>138 (24.3%)</b>
<b>Eligible and randomized</b>	<b>430 (75.7%)</b>

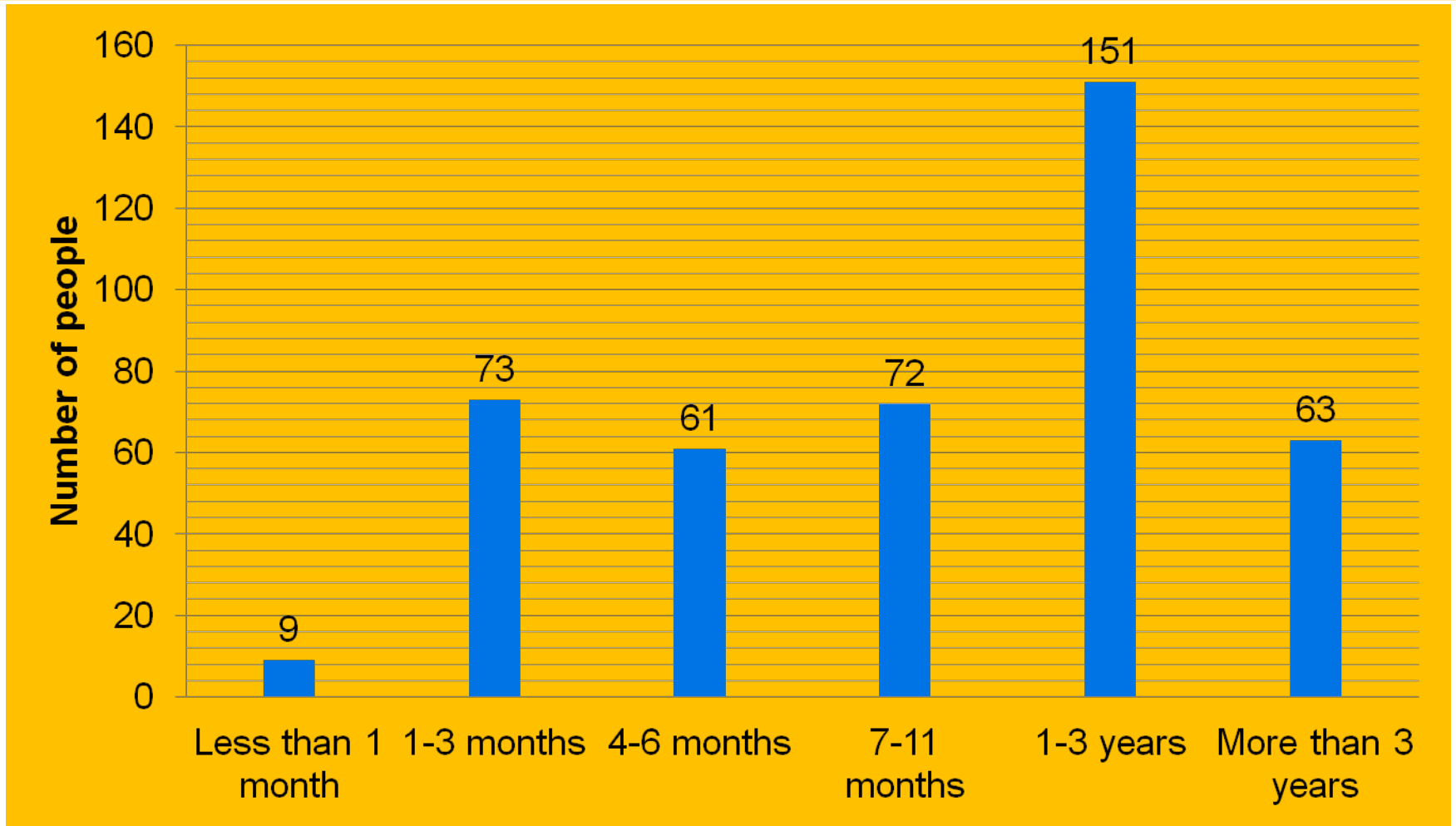
# Sociodemographic Data

<b>Demographics</b>	<b>Mean, %</b>
<b>Average Age</b>	<b>44 (SD 9.9)</b>
<b>Male</b>	<b>74%</b>
<b>Education, HS diploma or higher</b>	<b>77%</b>
<b>Monthly income less than \$400</b>	<b>64%</b>

# Ethnicity



# Length of Homelessness

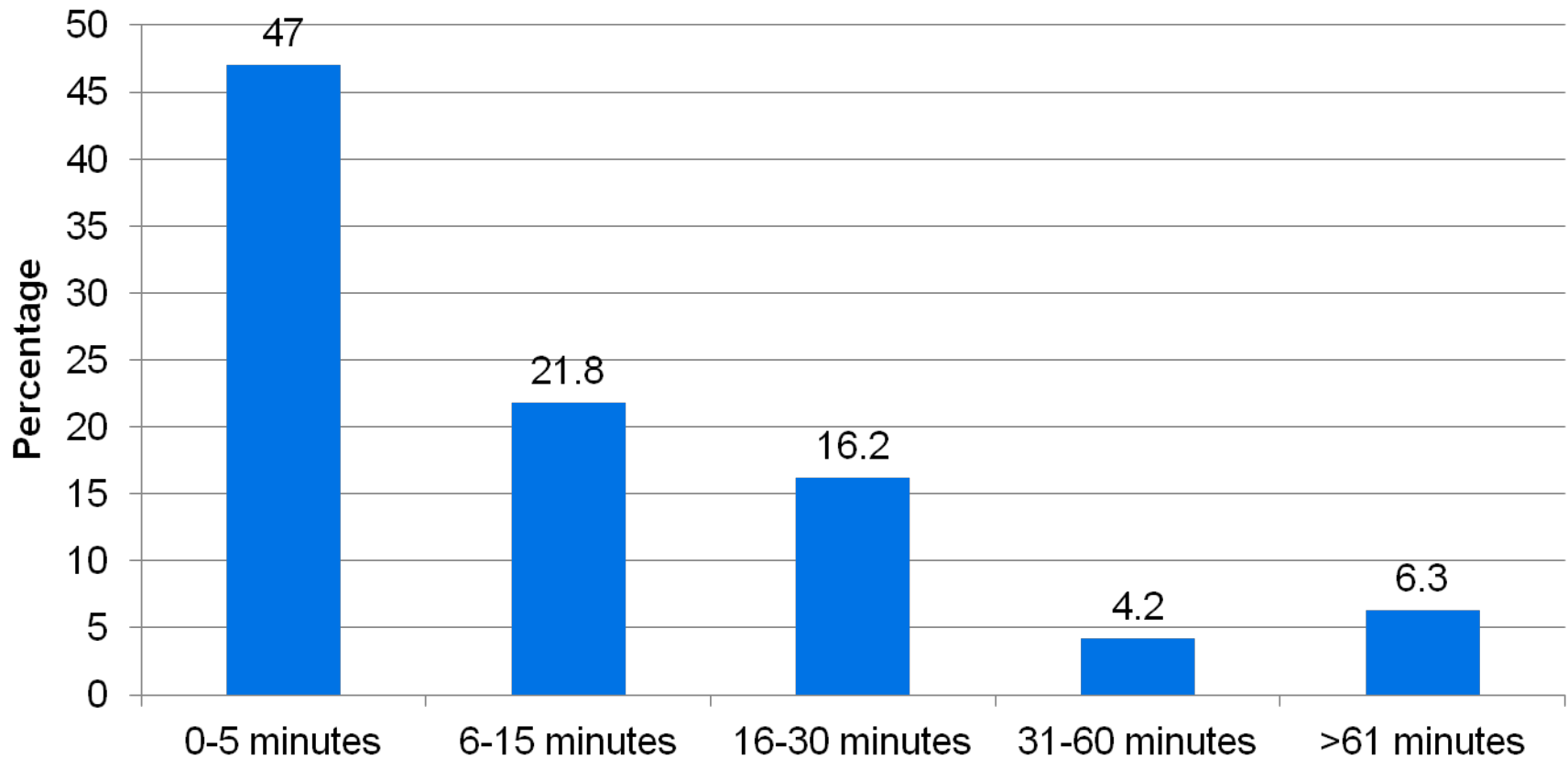


# Baseline Smoking Behavior

<b>Quit Attempts in the past year</b>	<b>2.5 (5.2)</b>
<b>Amount spent on cigarettes per week</b>	<b>\$27.50 (16.6)</b>
<b>Number of cigarettes smoked/day (mean, SD)</b>	<b>19 (16.6)</b>
<b>Age started smoking regularly (mean, SD)</b>	<b>16 (5.9)</b>
<b>Importance to you to quit smoking? (0-10)</b>	<b>9.1</b>
<b>Confidence that could quit smoking? (0-10)</b>	<b>7.3</b>

# Nicotine Dependence

Q: How soon after you wake up do you smoke your first cigarette?





# Baseline Chemical Health

<b>Drank alcohol in past 30 days</b>	<b>57.5%</b>
<b>Importance of quitting drinking (scale 1 – 10)</b>	<b>7.6</b>
<b>Confidence for quitting drinking (scale 1 – 10)</b>	<b>8.4</b>
<b>Ever used any illicit drug &gt;5 X in lifetime</b>	<b>82.8%</b>
<b>Consider self as chemically dependent</b>	<b>42.7%</b>
<b>Received drug / alcohol treatment past 2 years</b>	<b>25.2%</b>

# Psychosocial Variable

Variable	N= 430
Depression PHQ9 $\geq$ 10, past 2 weeks, n (%)	34.6%
Stress (PSS-4, past 30 days), mean (SD)	8.4 (2.3)

# Primary Outcome: Smoking Abstinence

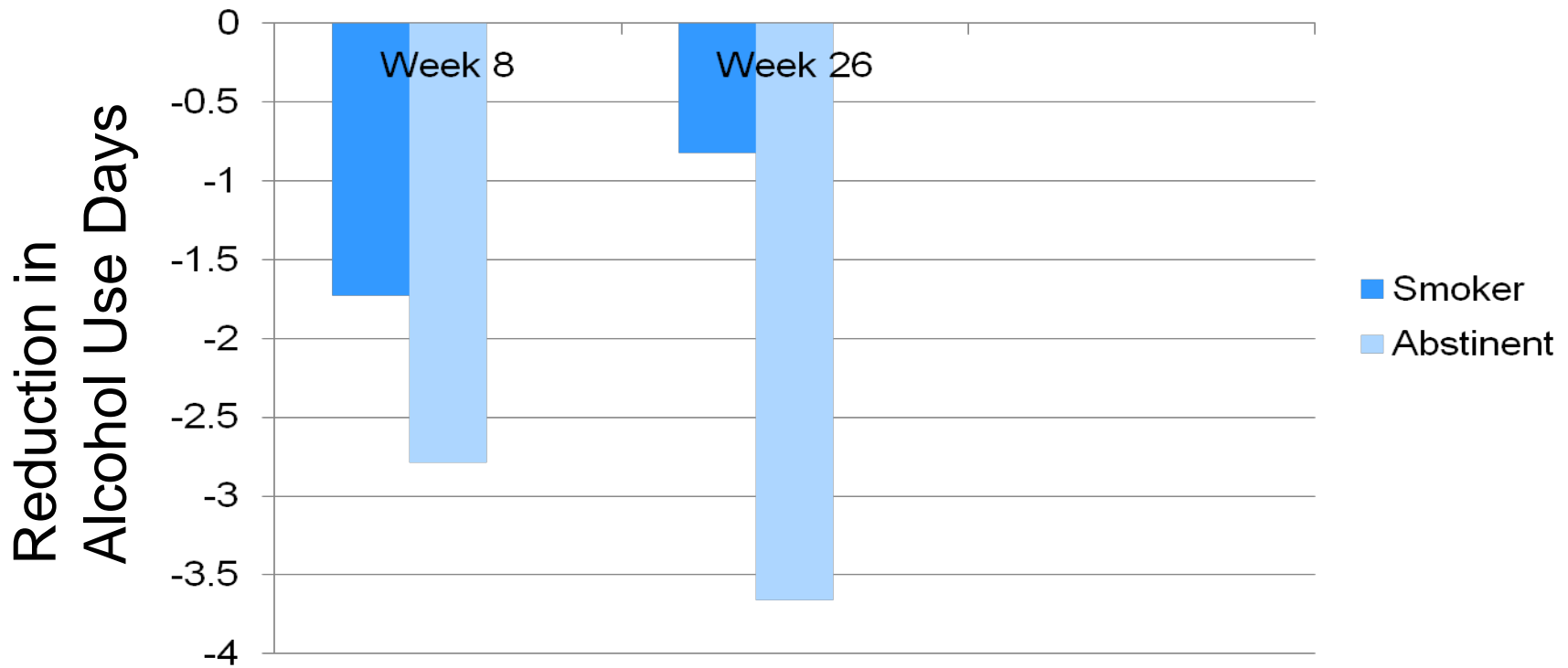
<b>Week 26</b>	<b>Motivational Interview</b>	<b>Standard Care</b>	<b>p value</b>
<b>Self Reported Quit</b>	<b>16.6%</b>	<b>11.6%</b>	<b>NS</b>
<b>Verified Quit</b>	<b>9.26%</b>	<b>5.61%</b>	<b>NS</b>

# Secondary Outcome: NRT Adherence

	<b>MI (n=216)</b>	<b>Standard Care (n=214)</b>	<b>p value</b>
<b>Baseline Motivation to adhere, mean (SD)</b>	<b>45.4 (6.3)</b>	<b>45.3 (6.7)</b>	<b>NS</b>
<b>Week 6 Motivation to adhere, mean (SD)</b>	<b>45.8 (7.0)</b>	<b>44.4 (7.5)</b>	<b>0.08</b>
<b>Baseline Self-efficacy to adhere, mean (SD)</b>	<b>78.2 (18.0)</b>	<b>78.7 (17.1)</b>	<b>NS</b>
<b>Week 6 Self-efficacy to adhere, mean (SD)</b>	<b>85.4 (19.1)</b>	<b>82.9 (17.5)</b>	<b>NS</b>

# Change in Alcohol Behavior

Alcohol use decreased among participants who quit smoking



# Limitations

- **Our study enrolled homeless smokers in metropolitan area of Minnesota**
- **Participants were self selected and motivated**
- **MI targeted adherence to NRT and not smoking cessation**

# Conclusions

- Feasibility and acceptability demonstrated
- Smokers who are homeless will enroll
- They can be retained in an RCT targeting cessation
- **75%** of our enrolled completed final week 26 visit

# POWER TO QUIT II: Currently Enrolling

- **Competitive Renewal, NHLBI funded, 5 year trial**
- **Check out our PTQ II Poster**

