

Tobacco Harm Reduction Research Data Interim Report 10/30/2020

Kevin McGirr, RN, MS, MPH
Principal Investigator

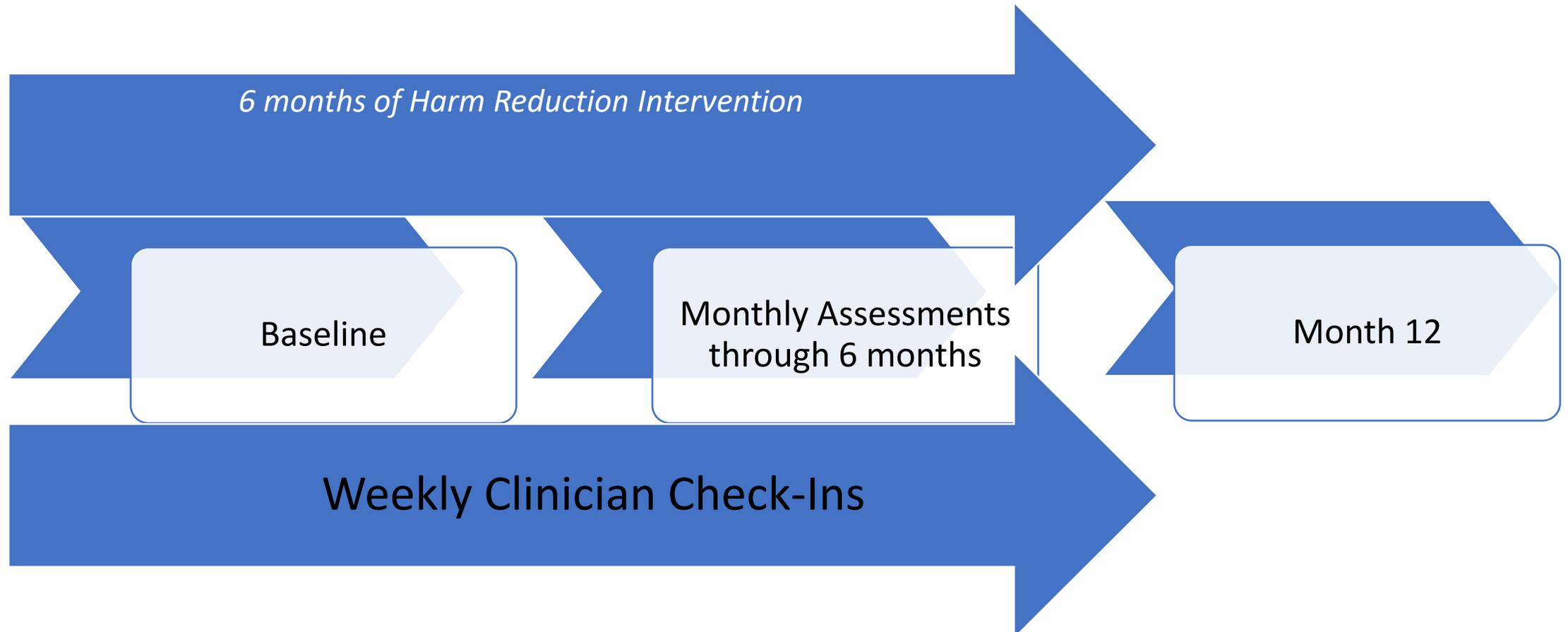


Jane Burke-Miller, PhD
Analyst



Evaluation Design

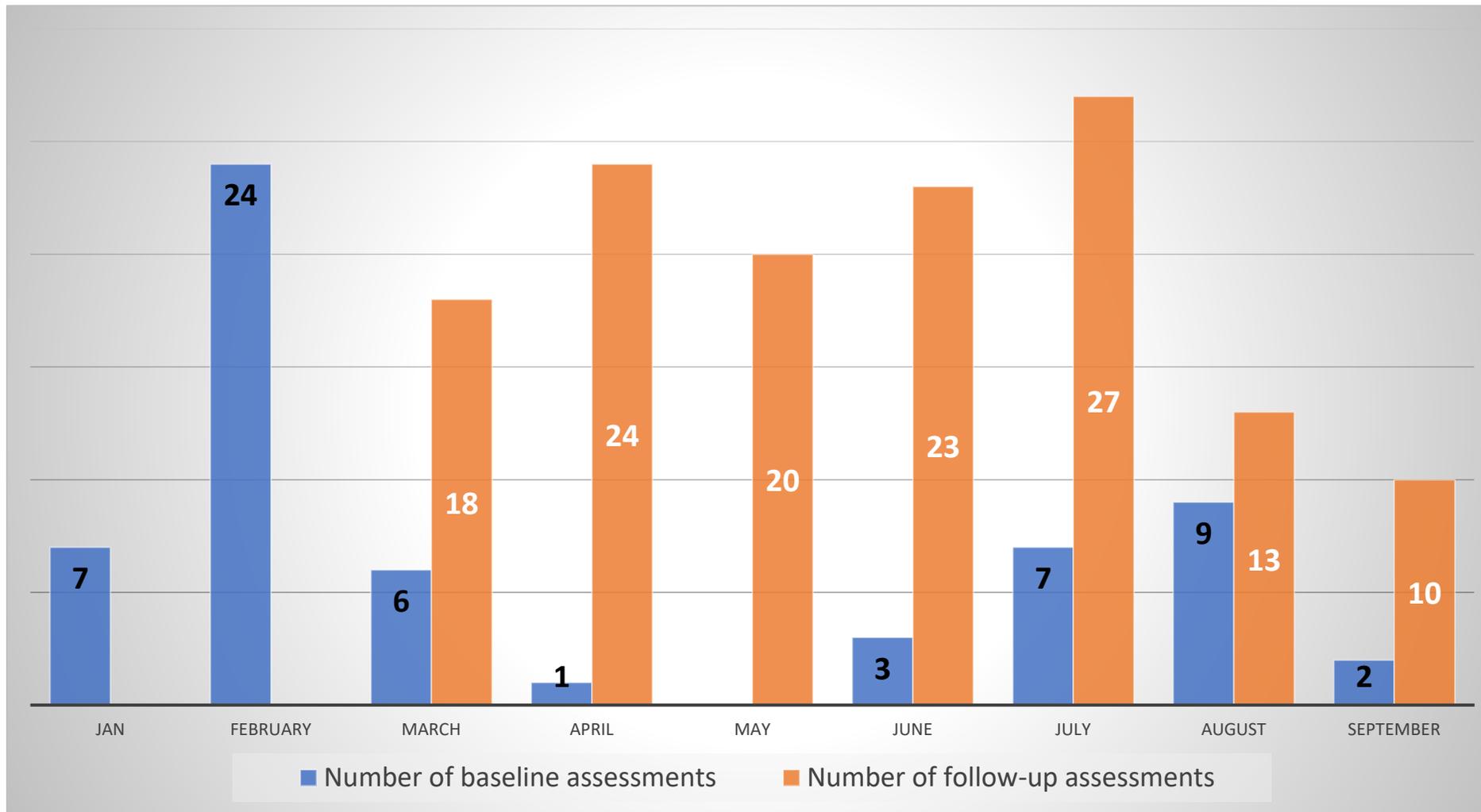
- Baseline and monthly assessments during 6-month intervention
- Weekly clinician check-ins during intervention
- 1 follow-up assessment at 12 months following baseline



Evaluation Outcomes

- Primary outcome measures
 - Number of cigarettes smoked
 - Fagerstrom Test of Nicotine Dependence
 - Breathalyzer carbon monoxide
 - Salivary measure of tobacco smoking
- Secondary outcome measures
 - Smoking Decisional Balance Scale (pros and cons of smoking)
 - Challenges to Smoking Behavior Change (internal and external barriers)
 - Working Alliance Inventory (agreement on goals, agreement on tasks, personal bond)
- Change in outcomes measured between baseline and 6 months, and between baseline and 12 months

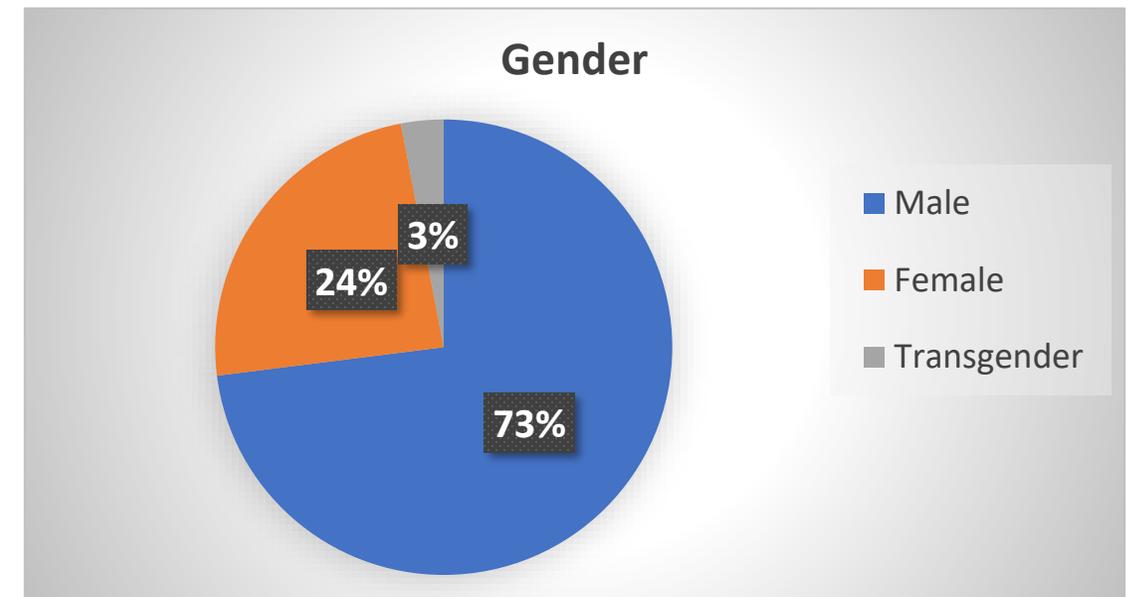
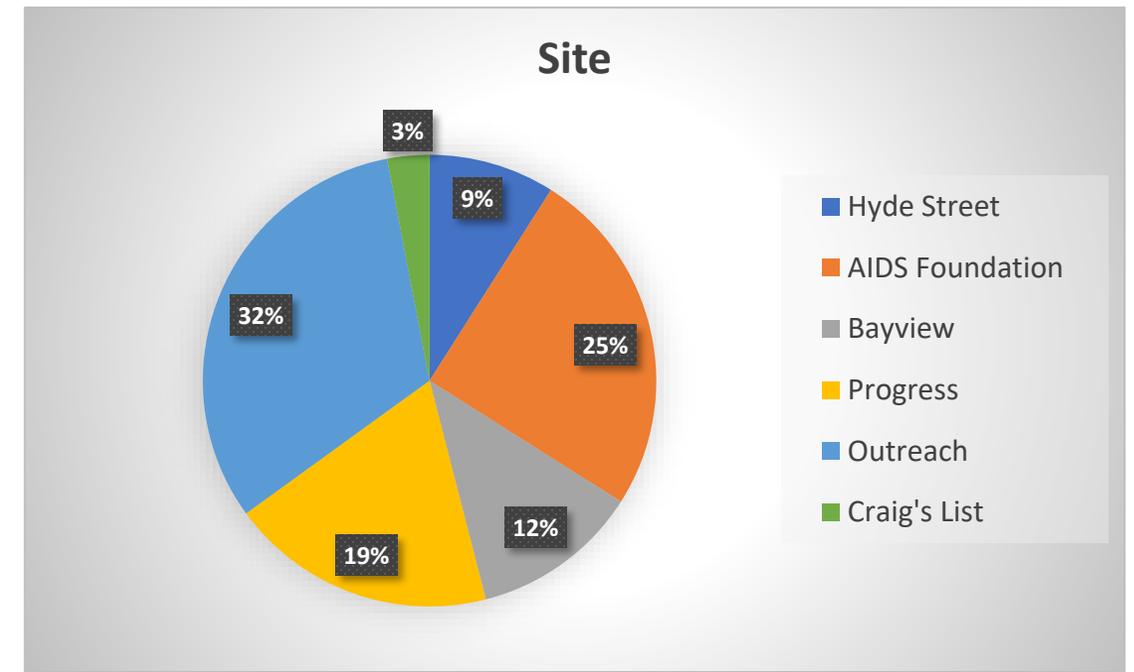
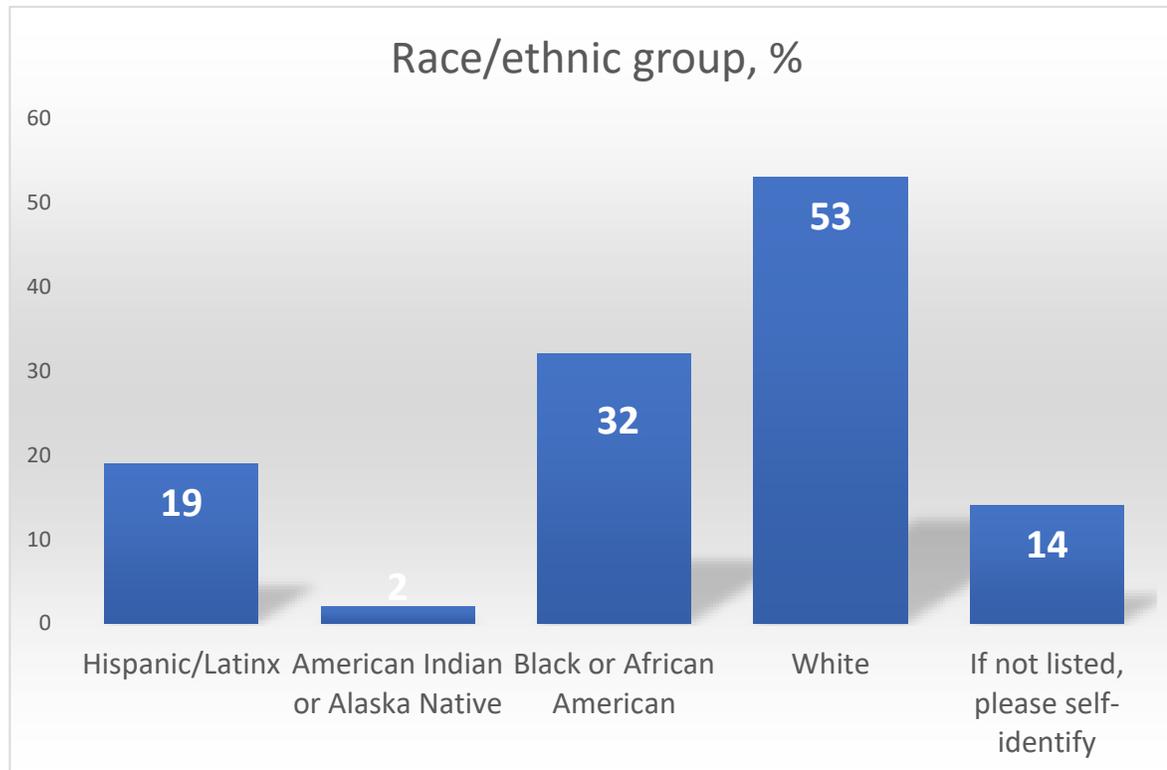
Number of
baseline (n=59)
and
follow-up
assessments
(n=135) completed
per month



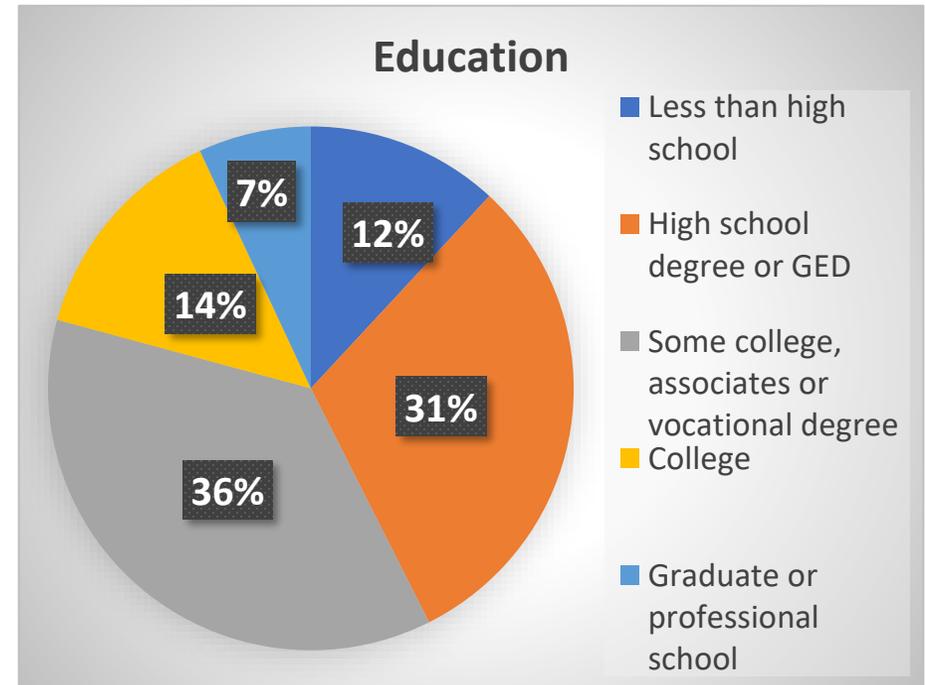
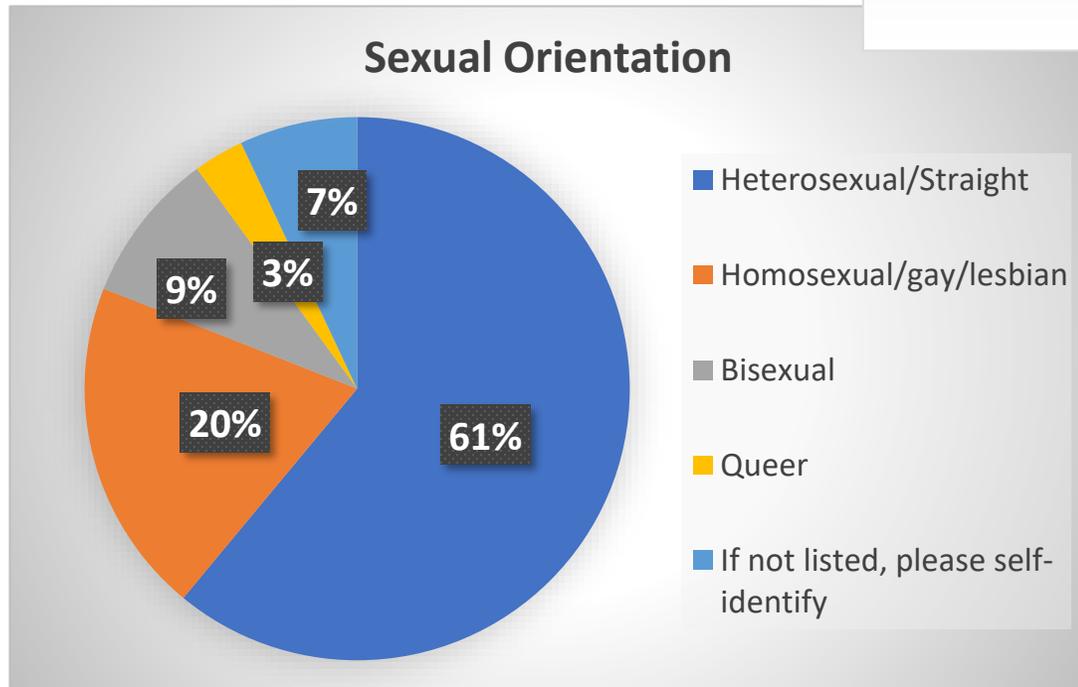
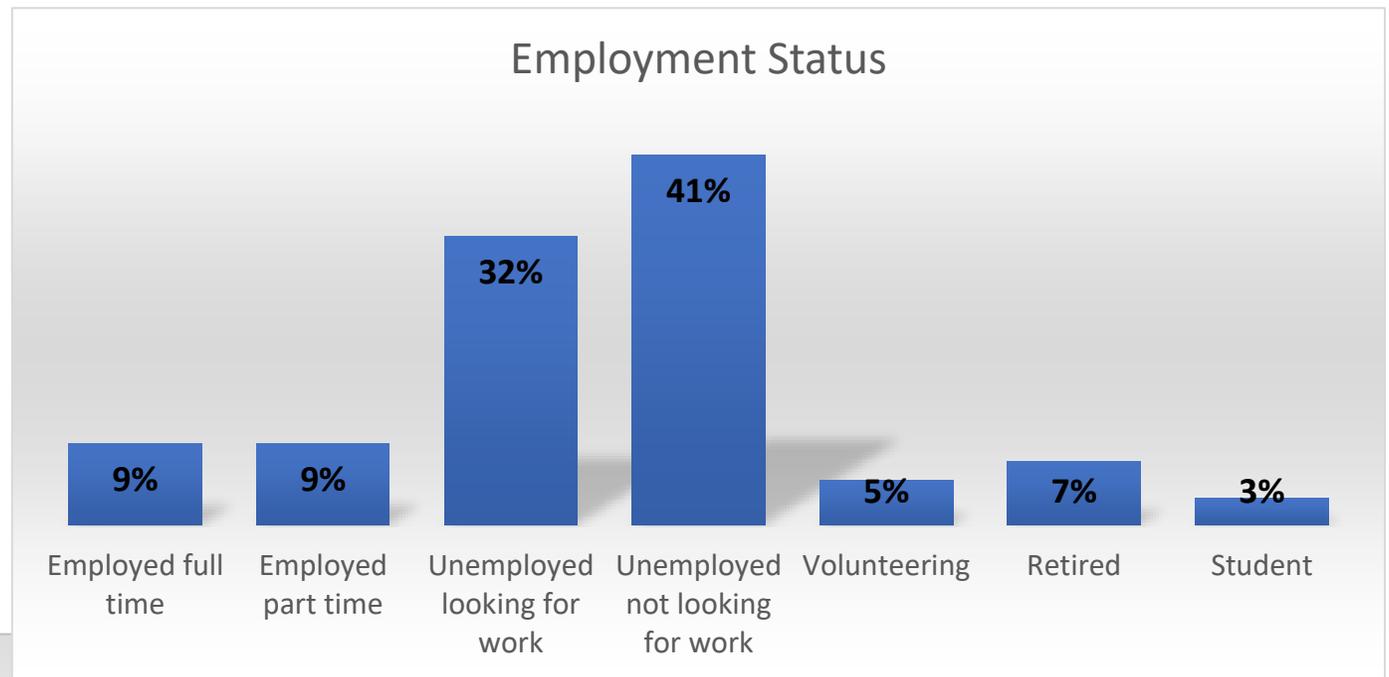
- Note that baseline assessments fell off in April, May, and June.

Participant characteristics at baseline (N=59)

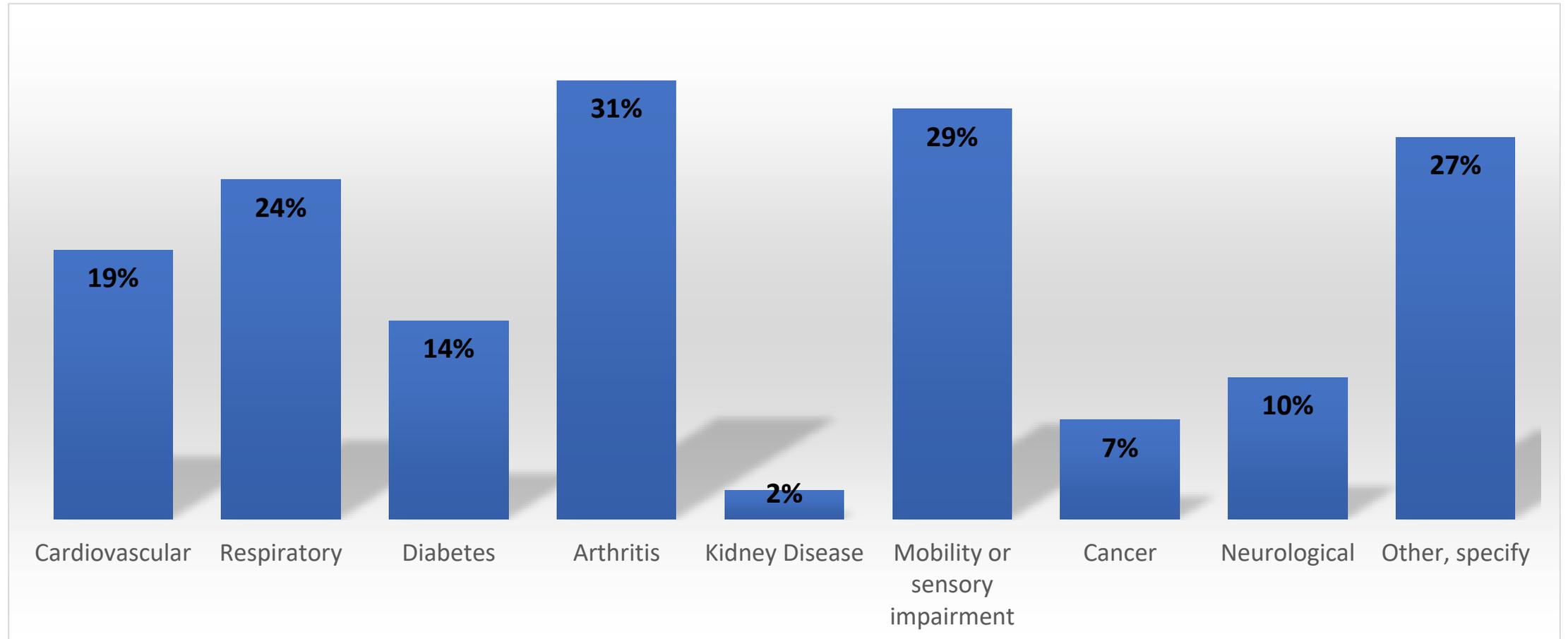
- Participant ages range from 23-69 years, with an average of 50 years



Participant characteristics at baseline (N=59)

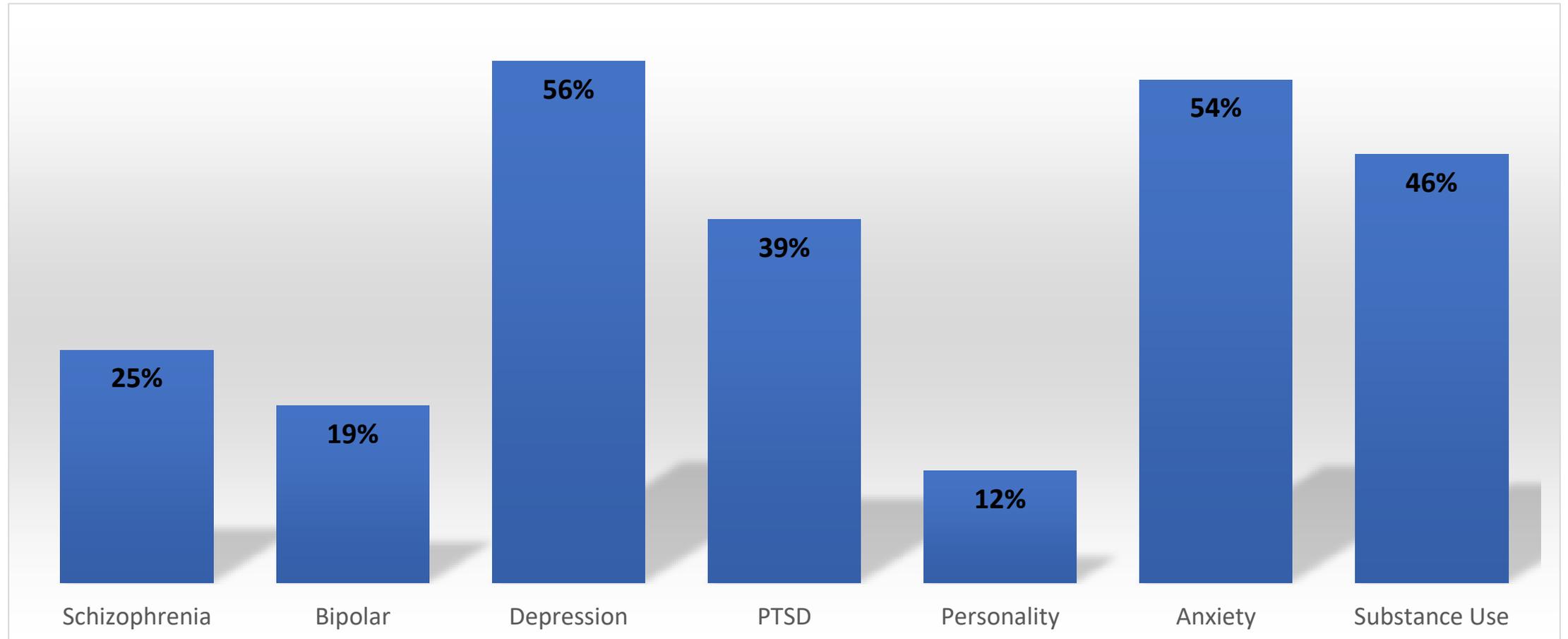


Physical health conditions reported at baseline (N=59)



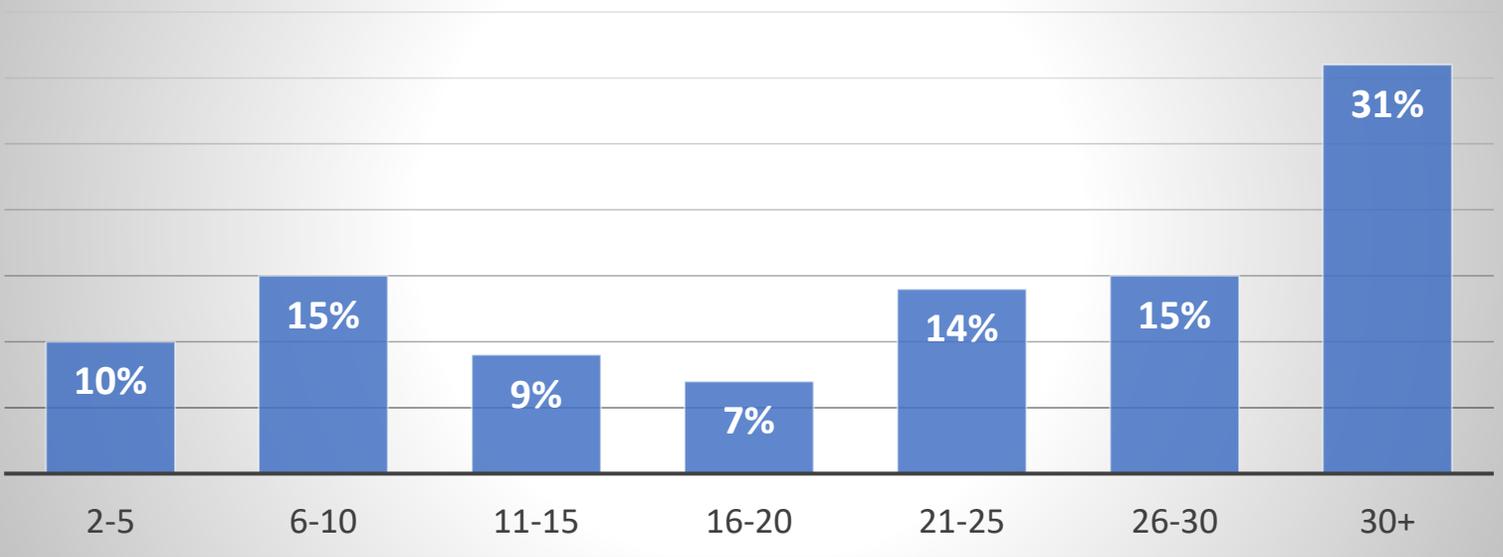
- Average 1.6 physical conditions reported per participant

Behavioral health conditions reported at baseline (N=59)



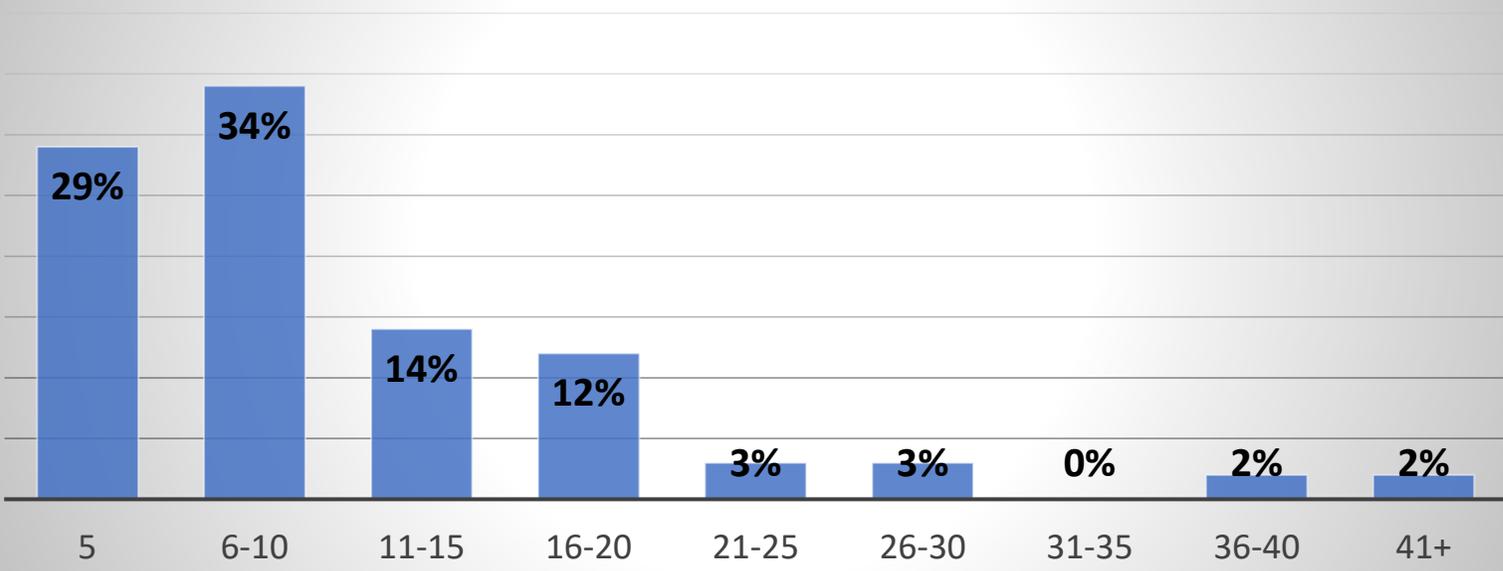
- Average 2.6 behavioral conditions reported per participant

Years smoked

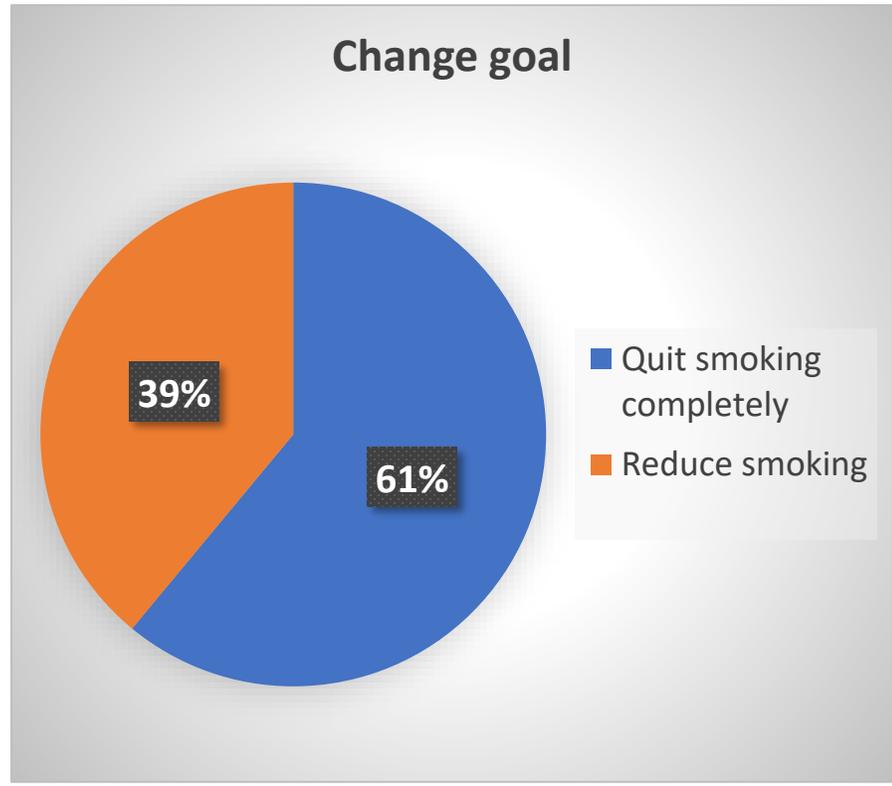


Smoking history, behavior, and behavior change goal

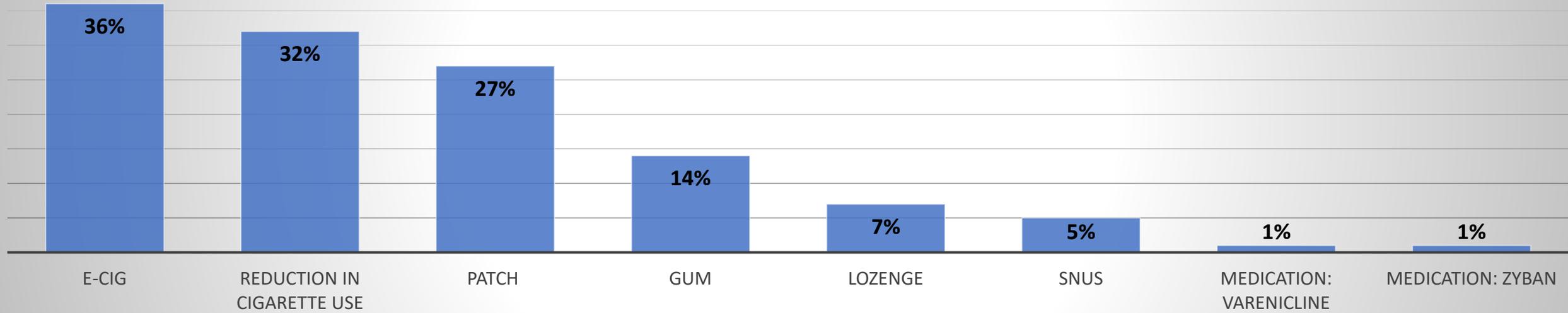
Current smoking (per day)



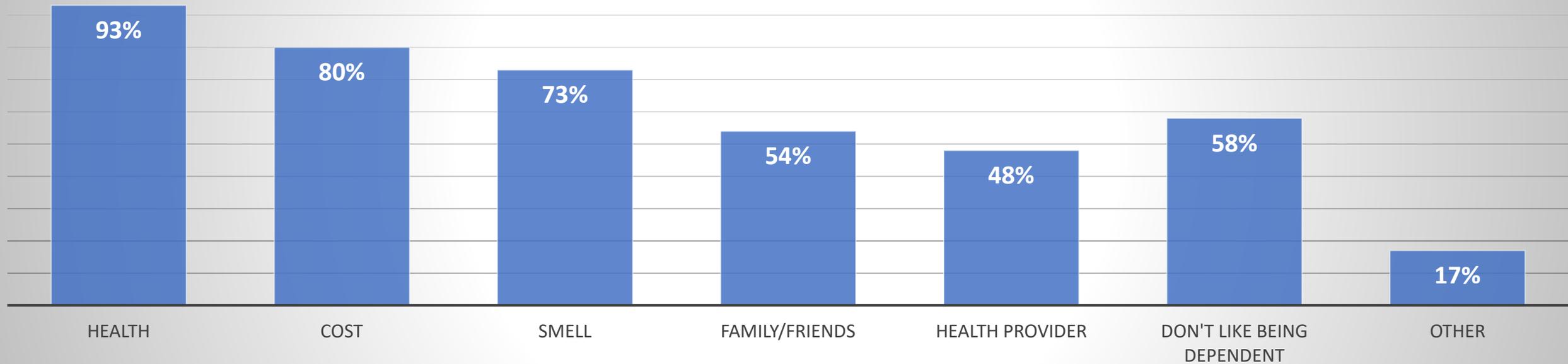
Change goal



Strategy for change used during intervention



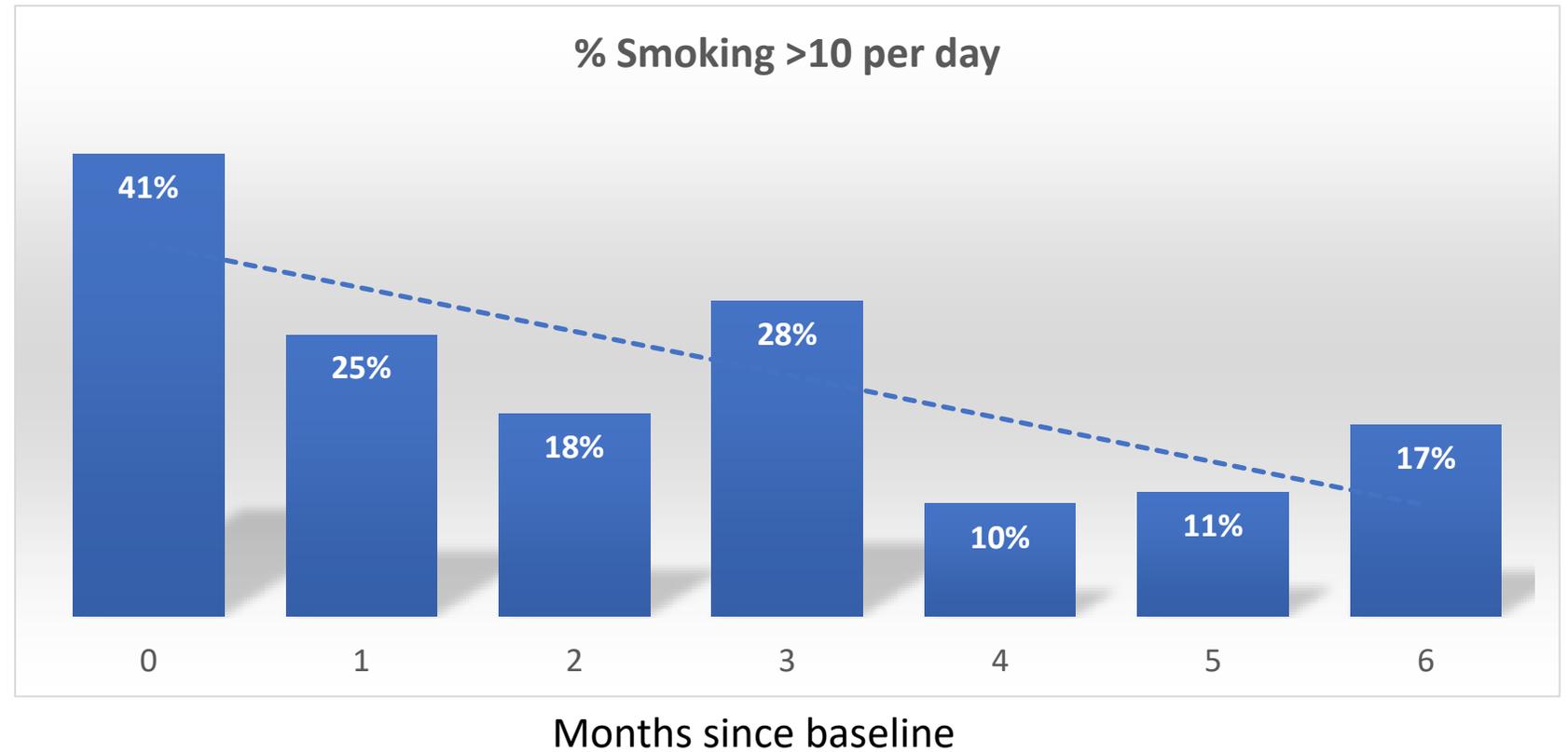
Reason for change reported at baseline



Summary of weekly check-in data

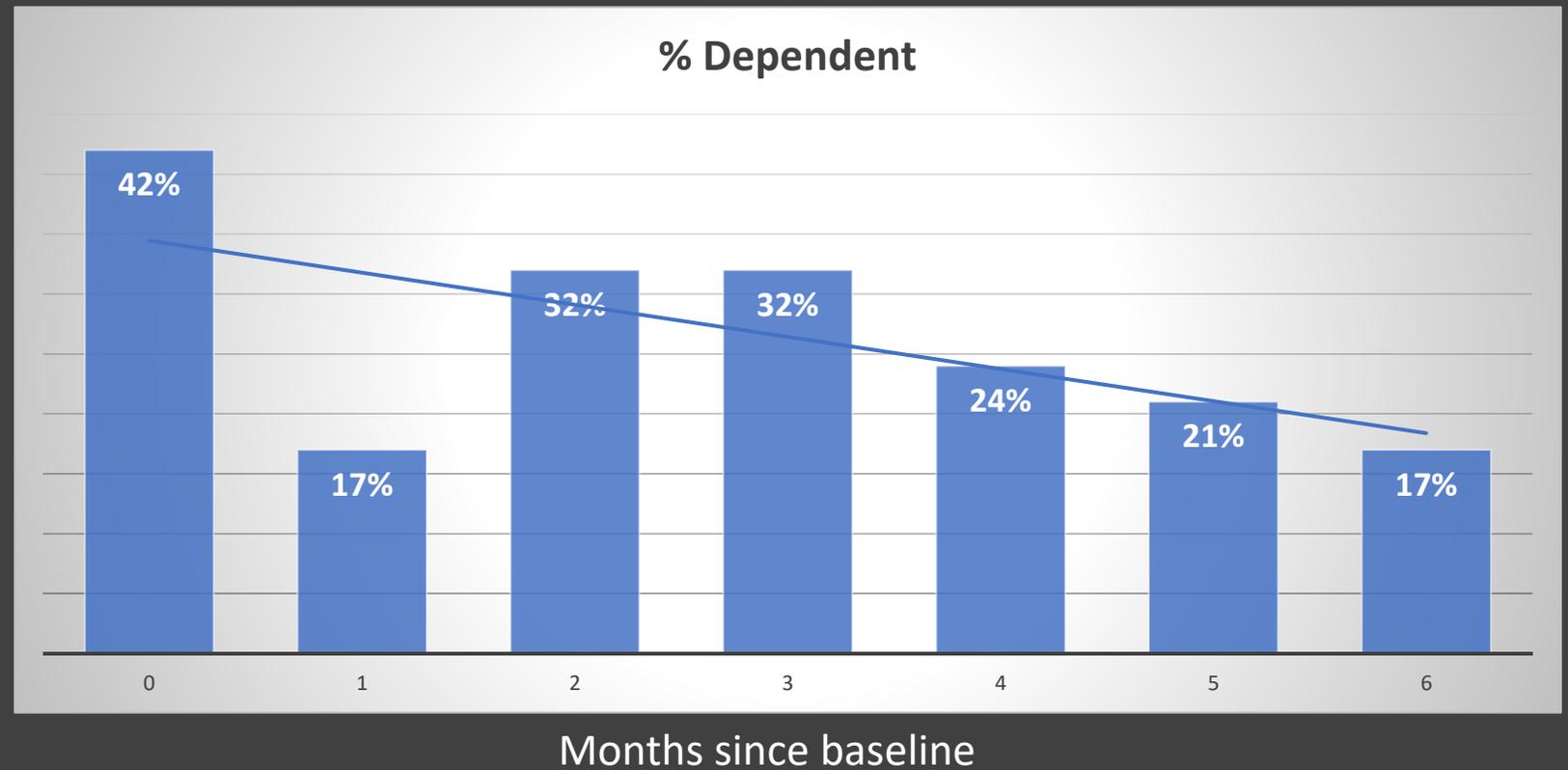
- Almost all weekly sessions were individual rather than group: individual sessions were reported in 99% of the weekly check-ins, compared to group sessions in 5% of weekly check-ins.
- Weekly contact (in-person or by phone) ranged from 0 to 75 minutes, with an average of 11 minutes.
- Participants achieved or exceeded goals in 55% of weeks (52% achieved and 3% exceeded).
- Participants experienced no change in behavior in 30% of weeks and relapsed in 15%.
- No goal change was reported in 80% of weeks, with new goals of complete cessation (7%), more reduction (8%), less reduction (3%), and other (2%).
- A new strategy or dose was reported in 13% of weeks, primarily lozenge (5%), gum (3%), or patch (2%).
- Interventions: motivational boost (62%); practical strategies (44%); cognitive/mindful (42%); and education/information (24%).

Primary
Outcome:
Number of
cigarettes
smoked



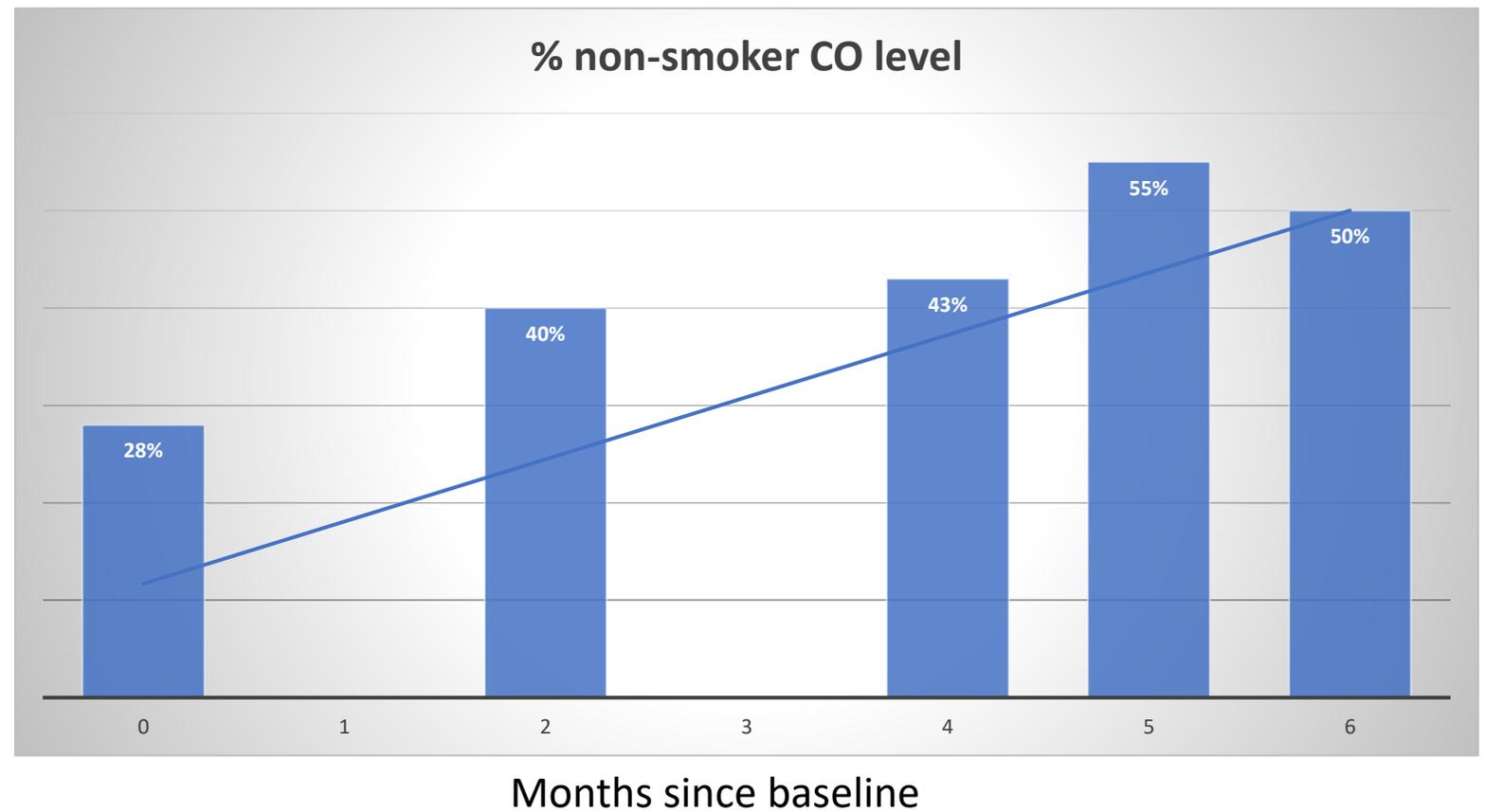
- The percent of participants smoking more than 10 cigarettes per day declined over time ($p < .05$).

Primary
outcome:
Nicotine
Dependence



- The percent of participants scoring as nicotine dependent on the Fagerstrom Test of Nicotine Dependence declined over time ($p < .05$).

Primary Outcome:
Breathalyzer carbon monoxide



- The percent of participants with breathalyzer carbon monoxide levels that indicate non-smoking levels (CO ppm <6) increased significantly over time ($p < .05$).
- Note that a number of breathalyzer tests did not occur when participants were not seen in person due to COVID-19.

Additional outcomes

- Salivary measure of tobacco smoking (measured at baseline and 6-month follow-up): Among the 19 participants with 6-month follow-up data, the mean salivary measure increased from 52.0 to 58.2 ($p < .10$).
- Scores on a measure of the cons of smoking increased over time ($p < .05$) (e.g., “I am embarrassed to have to smoke.”)
- Scores on a measure of extrinsic Challenges to Smoking Behavior Change declined ($p > .05$) (e.g., “Lack of support or encouragement from health professionals.”)
- Scores on the Working Alliance Inventory started high (average of 55 out of possible 60) and did not increase or decrease significantly over time.
- Focus Group Qualitative Analysis in process: in-depth examination of motivations and barriers in respondents’ own words.

Next steps with continuing data collection

- More complete picture of intervention and outcomes
- Analysis of differences in outcomes associated with participant characteristics, e.g.,
 - how does smoking history affect change goals, strategies, and behaviors?
 - do change behaviors differ for people depending on chronic health conditions?
- Analysis of impact on outcomes of intervention type and level of engagement from weekly check-in data, e.g.,
 - which interventions and strategies seem to have the biggest impact?
 - is there a minimum quantity of intervention exposure that results in significant outcomes?
- Analysis of characteristics of intervention completers compared to drop-outs or intermittently engaged and their outcomes
- Begin to look at long-term outcomes (12 months after baseline)
- Greater power to detect statistically significant change even adjusting for multiple comparisons
- Focus group and other qualitative text analysis

Summary

- Even with COVID-19 interruptions, the intervention is showing positive change among participants over the first 6 months:
 - Significant decline in number of cigarettes smoked
 - Significant decline in nicotine dependence
 - Significant increase in non-smoking levels of breathalyzer carbon monoxide
 - Patterns indicate positive changes in salivary tobacco measures
 - Patterns indicate that participants are becoming more influenced by the negatives of cigarette smoking; participants are feeling external support for behavior change; and participants report a good working alliance with intervention staff