
Smoking Cessation
Leadership Center



University of California
San Francisco

A smoke-free home intervention in permanent supportive housing for formerly homeless adults

Maya Vijayaraghavan, MD, MAS

February 18, 2020

Moderator

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Smoking Cessation Leadership Center
University of California, San Francisco

A National Center of Excellence for Tobacco-
Free Recovery



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Smoking Cessation: A Report of the Surgeon General

The first [report](#) focused solely on smoking cessation in 30 years



2020 Surgeon General's Report
on Smoking Cessation

**Quitting smoking is
beneficial at any age.**

Learn more about this report:
[CDC.gov/CessationSGR](https://www.cdc.gov/CessationSGR)



[Executive Summary](#)
[Key Findings Factsheet](#)
[Consumer Guide](#)



Today's Presenter

Maya Vijayaraghavan, MD, MAS

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University of California, San Francisco



A smoke-free home intervention in permanent supportive housing for formerly homeless adults

Maya Vijayaraghavan, MD MAS
Division of General Internal Medicine



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SAN FRANCISCO GENERAL**
Hospital and Trauma Center

Acknowledgments

- Funding source
 - Tobacco Related Disease Research Program
- Community partners – Permanent supportive housing
 - Lifelong Medical
 - Swords to Plowshares
 - Abode Services
 - Delivering innovation in supportive housing
 - LifeMoves
 - Community housing partnership
- Research team



Anne-Berit



Toshali



Holly



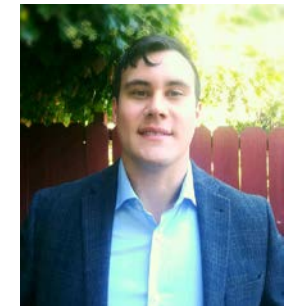
Marlena



Natalie



Arturo



Kenny

Objectives

- Describe how tobacco use impacts homeless adults
- Discuss results of a pilot study of a smoke-free home intervention in permanent supportive housing
- Discuss promising strategies to engage with people experiencing homelessness around smoking cessation

My patient Mr. P

- Has schizophrenia
- Spends time in the Tenderloin
- Unsheltered most of the time
- Several brief encounters with the criminal justice system
- Smokes marijuana regularly, and uses crack/cocaine
- Smokes 10 to 15 cigarettes per day, if he can afford them
- Substitutes cigarettes with little cigars when he can't afford them
- Has severe chronic obstructive pulmonary disease (COPD)
- Malnourished, prioritizing cigarettes over food
- Several ER visits and hospitalizations for COPD and failure to thrive

Homelessness and patterns

- 3.5 million individuals experience homelessness yearly
- Chronic homelessness ~ 20-25%
 - Continuously homeless in the past year
 - 4 or more episodes in the past 2 years
- Intermittent homelessness ~ 50-60%
- Crisis or transitional homelessness ~ 10-15%

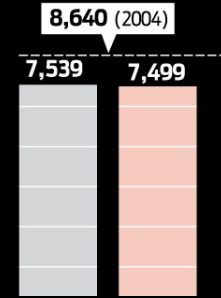


The situation on the streets

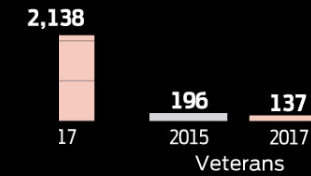


POINT-IN-TIME HOMELESS COUNTS

Estimated number of homeless cumulatively throughout the year in San Francisco: **21,000**

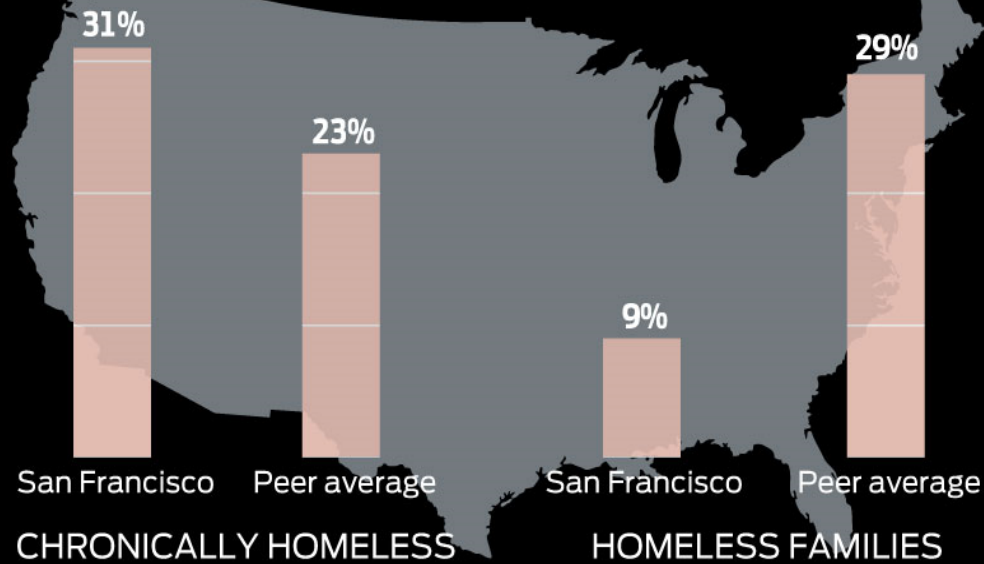


CHRONICALLY HOMELESS

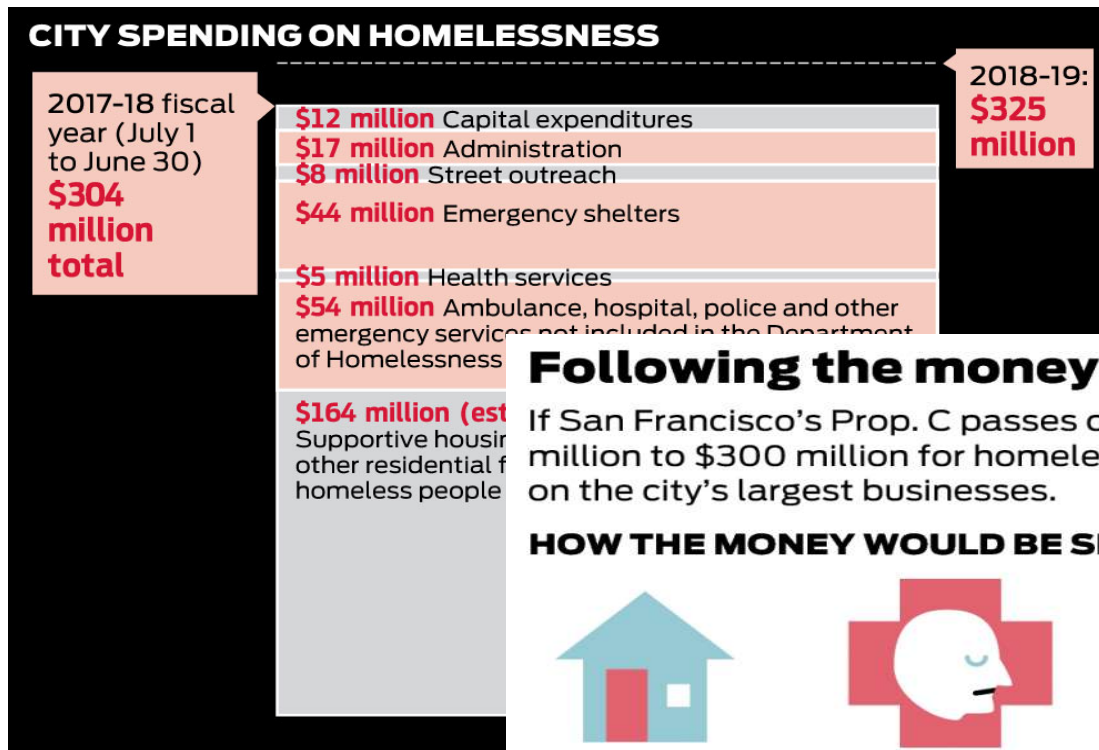


COMPARISON WITH OTHER MAJOR U.S. CITIES STRUGGLING WITH HOMELESSNESS

Percent of homeless population in 2017



San Francisco's spending on homelessness



Following the money on Proposition C

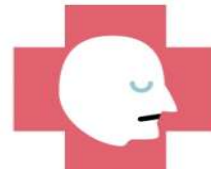
If San Francisco's Prop. C passes on Nov. 6, it would bring in \$250 million to \$300 million for homelessness services by raising taxes on the city's largest businesses.

HOW THE MONEY WOULD BE SPENT



At least
50%

Securing permanent housing for the homeless



At least
25%

Mental health services for homeless people with severe behavioral health issues



Up to
15%

Services for those who recently became homeless or are at-risk of becoming homeless



Up to
10%

Securing short-term shelter and access to hygiene programs

Source: Yes on C

John Blanchard / The Chronicle

Tobacco use is an entrenched aspect of homelessness

- 70% of homeless adults smoke
- 66% use non-cigarette tobacco
 - Cigars
 - Roll-your-own
 - E-cigarettes



Social norms play an important role in tobacco cessation

- **Factors that encourage**
 - Smoke-free policies
 - Cigarette prices and taxes
- **Factors that discourage**
 - Pervasiveness of smoking
 - Stress from homelessness
 - Boredom
 - Mental illness
 - Substance use
 - Service providers don't prioritize



Morbidity and mortality is high

The homeless population is aging

- Median age is 50
- High prevalence of smoking-related chronic diseases



San Francisco Chronicle



San Francisco Chronicle

Smoking-related diseases are the leading causes of mortality

- Homeless adults are 3-5 time more likely to die prematurely
- Substance abuse
 - Tobacco use comprises half of all the substance abuse related deaths
- Cancers
 - Trachea, bronchus and lung
- Cardiovascular disease

Recall my patient Mr. P

- Waitlist for permanent supportive housing
- Engaged with ED case management
- San Francisco Homeless Outreach Team
- Housed in a single room occupancy hotel
- He smokes indoors
- He pays 30% of his disability income on rent
- His main expenses are cigarettes, rent, food
- He spends about 20% of his monthly income on cigarettes
- He has missed his rent payment once before

30% of income spent on tobacco = Rent in supportive housing

- Permanent supportive housing
 - Subsidized housing
 - On-site or closely linked supportive services
- Distinct from public housing
- Single site vs. scattered sites
- Harm reduction



Proven and preferred approach to end chronic homelessness

Benefits of supportive housing

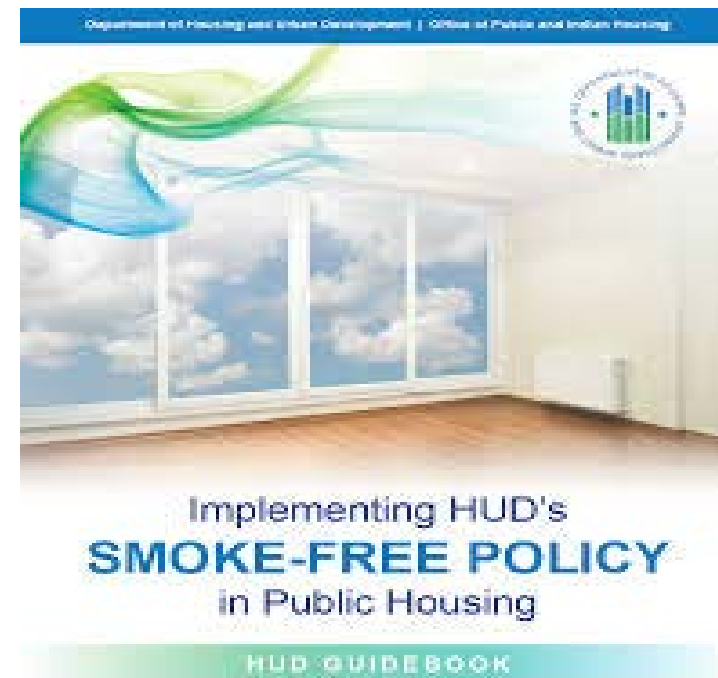
- Improved substance use outcomes
- Reduced episodes of homelessness
- Reduced long-term health care utilization
- Improved quality of life



Dec. 9, 2014 Photo: Brant Ward, The Chronicle

Smoke-free policies are uncommon in permanent supportive housing

- Public housing has a HUD mandate to implement smoke-free policies
- There is no such mandate for supportive housing



Smoke-free policies are one of the most effective tobacco control interventions

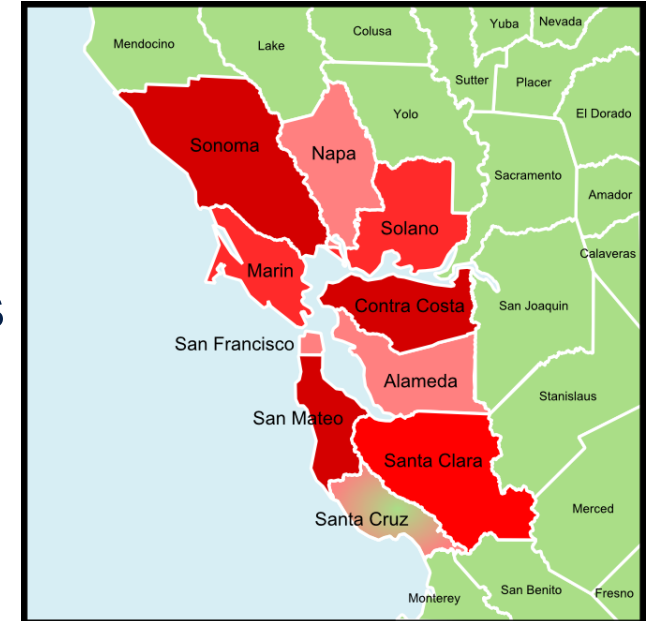
- Reduce exposure to secondhand smoke
- Reduce smoking prevalence
- Reduce cigarette consumption
- Increase quit attempts
- Reduce relapse to smoking
- Improve cardiovascular outcomes
- Reduce hospitalizations



Comprehensive smoke-free policies = more smoke-free homes

Smoke-free home intervention – A pilot social norms intervention

- Multi-component intervention
- Recruited 100 current smokers from 15 supportive housing sites
 - Smoked in their home
- Recruited 62 staff from these sites
 - Trained on how to provide brief cessation counseling
 - How to implement smoke-free homes



Smoke-free home intervention

PSH Residents

- 1-hour, 1-on-1 counseling on how to adopt a SFH
- Infographics on secondhand smoke, thirdhand smoke, & e-cigs
- 2009 FDA-proposed graphic warning labels
- Personal expenditure exercise
- SFH pledge
- \$25 for SFH adoption

PSH Staff

- 1.5 hour, group training
- Information on nicotine addiction
- Delivering 2As and R and 5As cessation counseling
- Update on cessation Rx
- Local cessation assistance resources
- Counseling on how to adopt a SFH

Smoke-free home intervention – Outcomes

- Resident follow-up at 3 months and 6 months
 - Smoke-free home adoption
 - CO verified point prevalence abstinence
- Staff follow-up at 3 months
 - Smoking knowledge, attitudes, practices survey



Smoke-Free Homes

PLEDGE

OUR TOP REASONS TO HAVE
A SMOKE-FREE HOME

I pledge to protect myself and my household from the dangers of secondhand smoke

- For children who are counting on me to keep them healthy
- For the health and comfort of our family and friends
- For the safety and appearance of our home
- For the health of our pets

I will make my home 100% smoke-free beginning on

Date: _____

Signed by:



Graphic warning labels and other materials



Think about how much you spend on tobacco.

What could you do with an extra

\$___ per day?

\$___ per week?

\$___ per month?

\$___ per year?

\$___ in the next 5 years?

\$___ in the next 20 years?

secondpaw smoke kills

CATS & DOGS ARE

2X as likely to get cancer if their owner smokes.¹

65% of U.S. households own a pet. That's **79.7** million homes.²

An estimated 1/5 of pet owners are also smokers.³

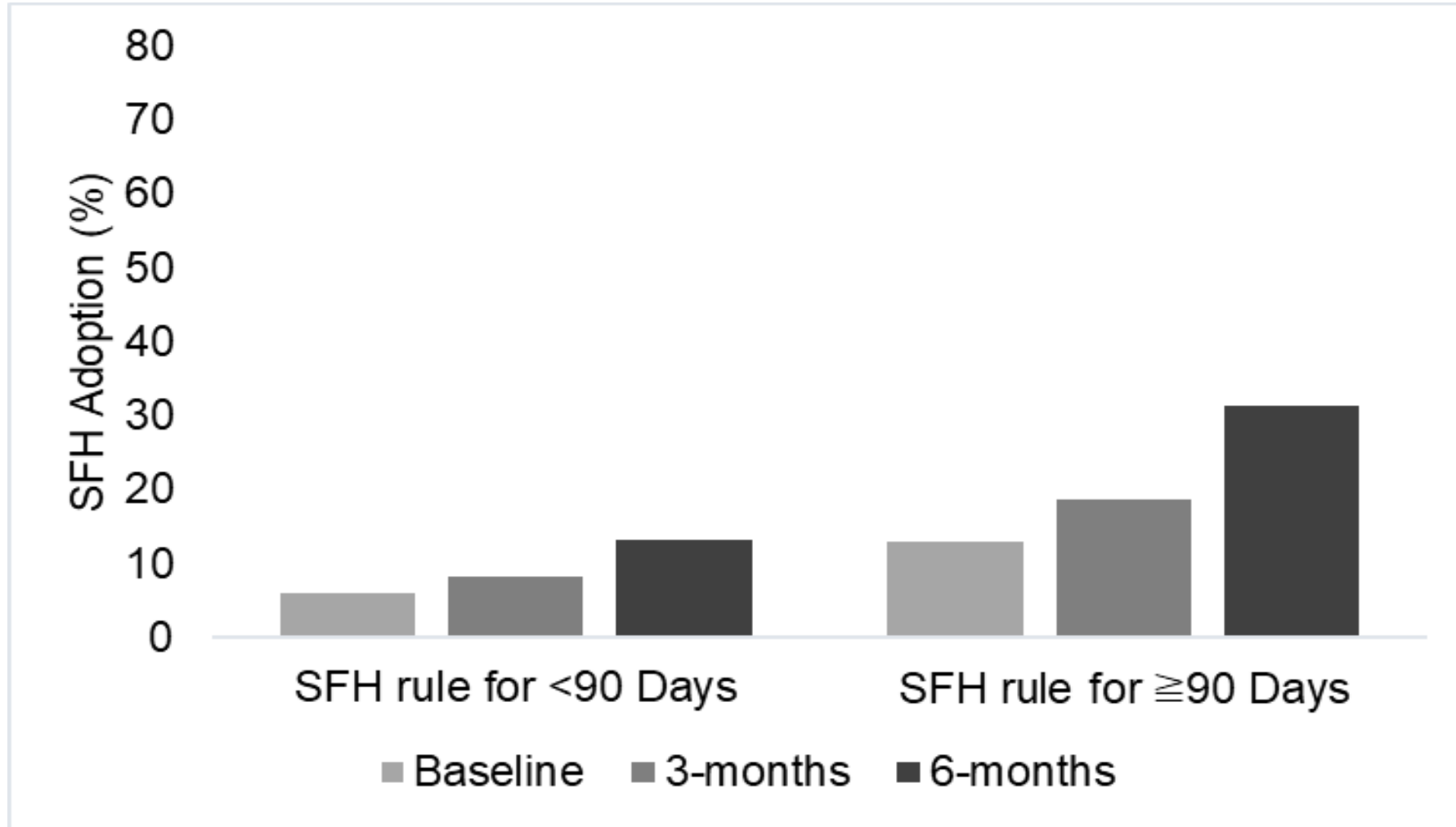
27% of non-smoking pet owners live with at least one smoker.⁴

Pet owners who smoke reported that information on the danger of pet exposure to secondhand smoke would motivate them to try to quit.⁵

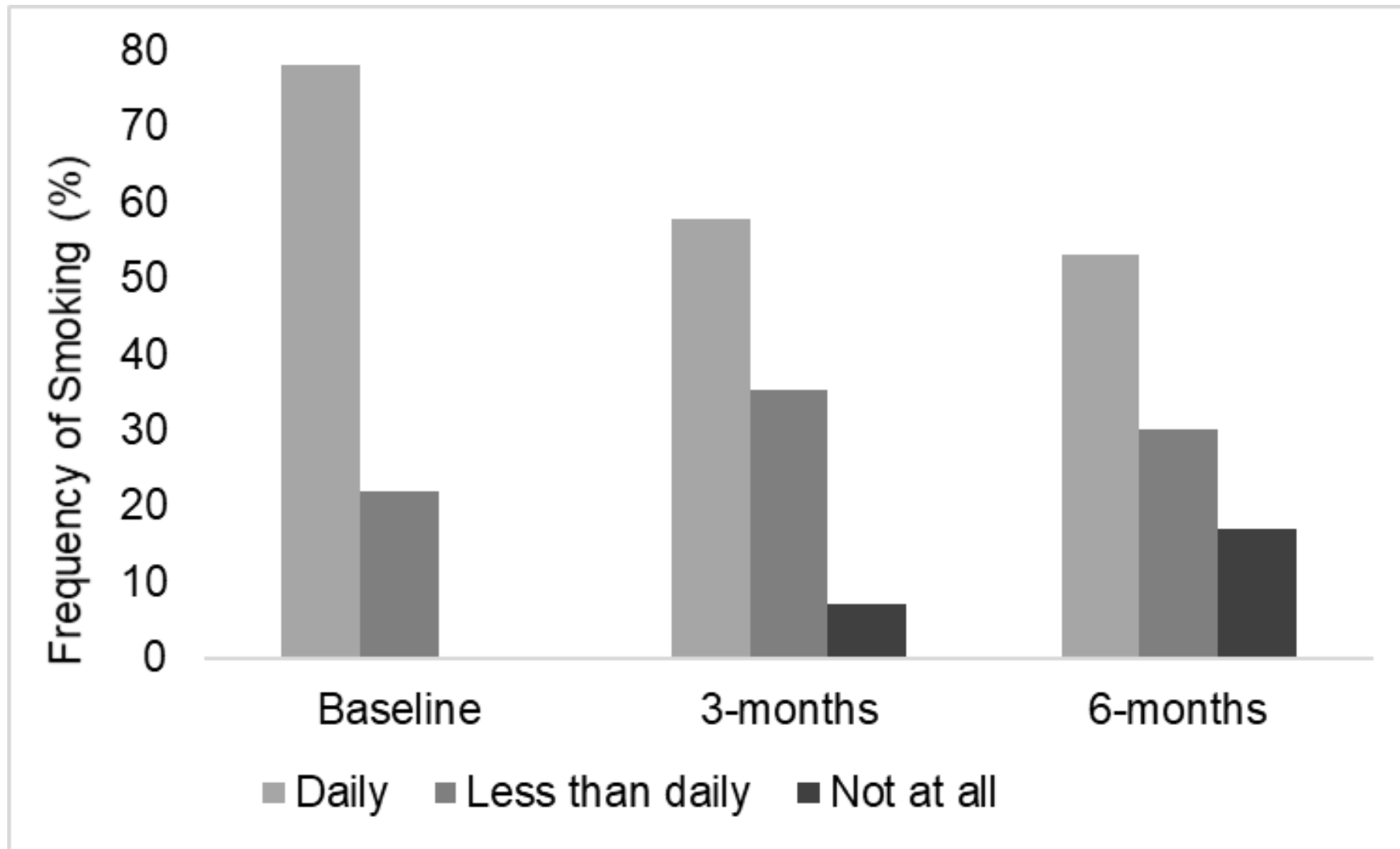
truth initiative
INSPIRING TOBACCO-FREE LIVES

1. Bertone et al. (2002) Environmental tobacco smoke and risk of malignant lymphoma in cats. *Am J Epidemiol*. Vol. 156, No. 3, 2002. Reif et al. (1998) Cancer of the oral cavity and paranasal sinuses and exposure to environmental tobacco smoke in pet dogs. *Am J Epidemiol*. Vol. 147, No. 6, 1998.
2. 2015-2016 APPA National Pet Owners Survey.
3. Marcola. (September 17, 2009) How cigarettes and smoking impact your pet's health.
4. <http://healthy.pets.american.com/realhealth/pets/articles/2009/09/17/how-cigarettes-and-smoking-impact-your-pets-health.aspx> [accessed December 11, 2015].
5. Altinger S, Davis R, Holtz A. (February 10, 2009) Pet owners' attitudes and behaviors related to smoking and secondhand smoke: a pilot study. *Tab Control*.

Smoke-free home adoption at 3 months and 6 months follow-up



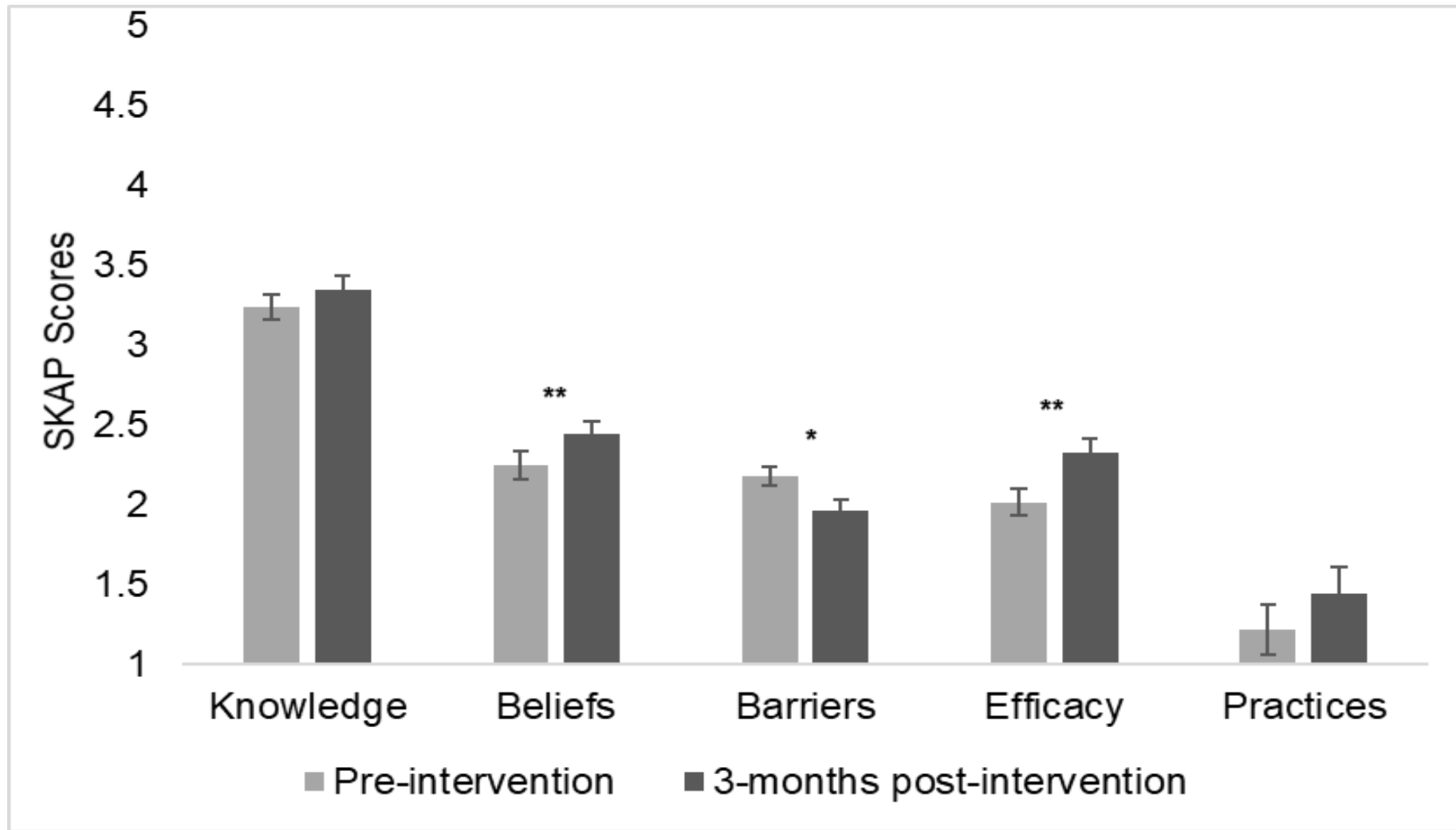
Smoking cessation at 3 months and 6 months



Predictors of SFH adoption and point prevalence abstinence

- SFH adoption
 - Having a favorable attitude toward smoke-free policy
- Point prevalence abstinence
 - A smoke-free home was associated with increased point prevalence abstinence

PSH staff smoking-knowledge, attitudes, & practices



* $p = 0.01$; ** $p < 0.01$

Smoke-free home intervention – Strengths

- Used existing materials
- Targeted individuals as they exited homelessness
- Targeted staff
- 17% cessation at 6 months better than:
 - Psychiatric inpatients: ~ 12%
 - Psychiatric outpatients: ~ 15%
 - Homeless adults: ~9%
- Easy to deliver and inexpensive

My patient Mr. P – Recall he missed his rent payment

- Involved case management at his supportive housing site:
 - Tobacco use a barrier to financial stability
 - Tobacco cessation counseling and pharmacotherapy
 - Encouraged adoption of smoke-free home
- Stopped smoking indoors
- Cut down on cigarette smoking
- Has more money
- Buys more food
- Fewer hospitalizations

Graphic warning labels and other materials...



Think about how much you spend on tobacco.

What could you do with an extra

\$ ___ per day?

\$ ___ per week?

\$ ___ per month?

\$ ___ per year?

\$ ___ in the next 5 years?

\$ ___ in the next 20 years?

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Smoke-free home study

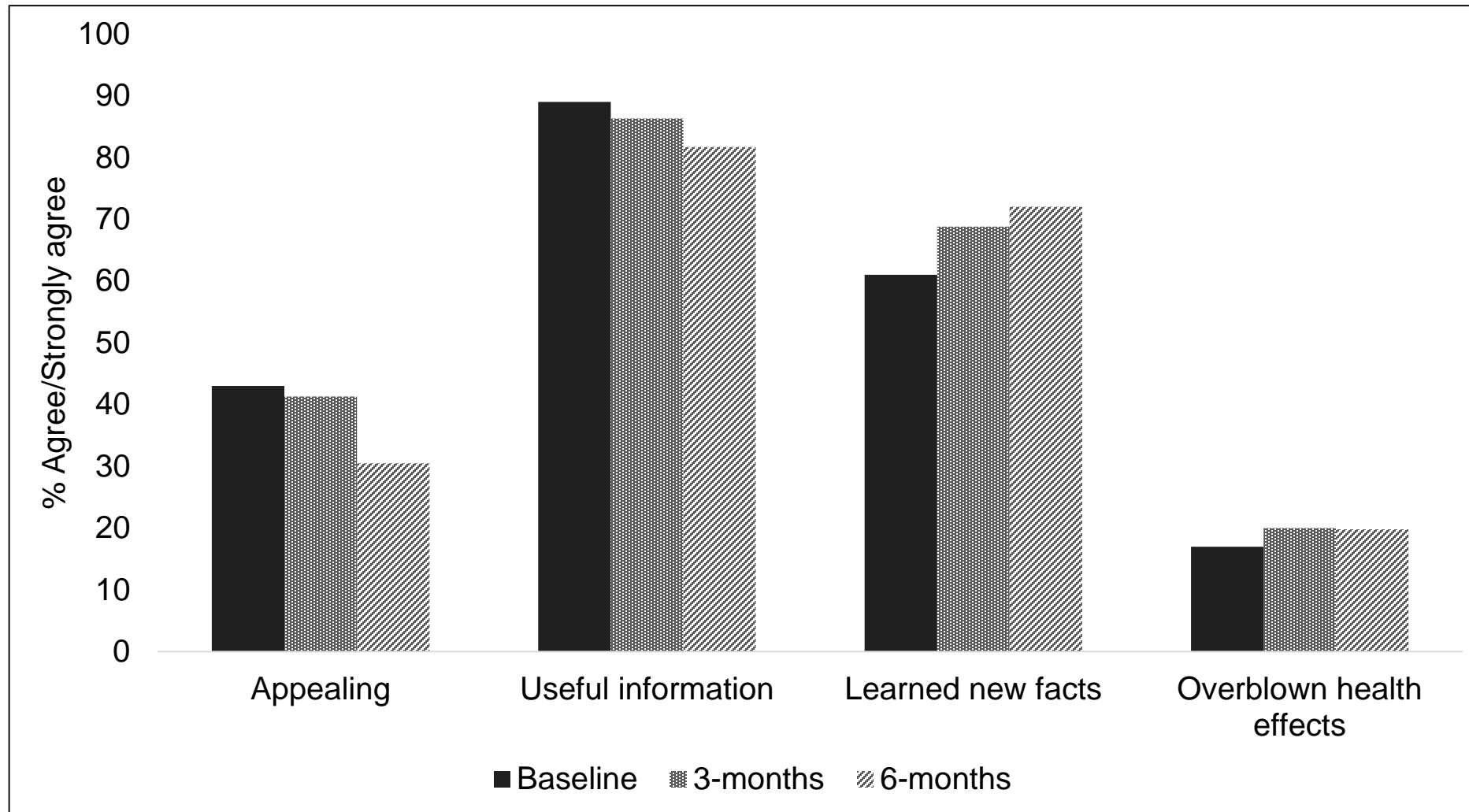
Graphic warning labels



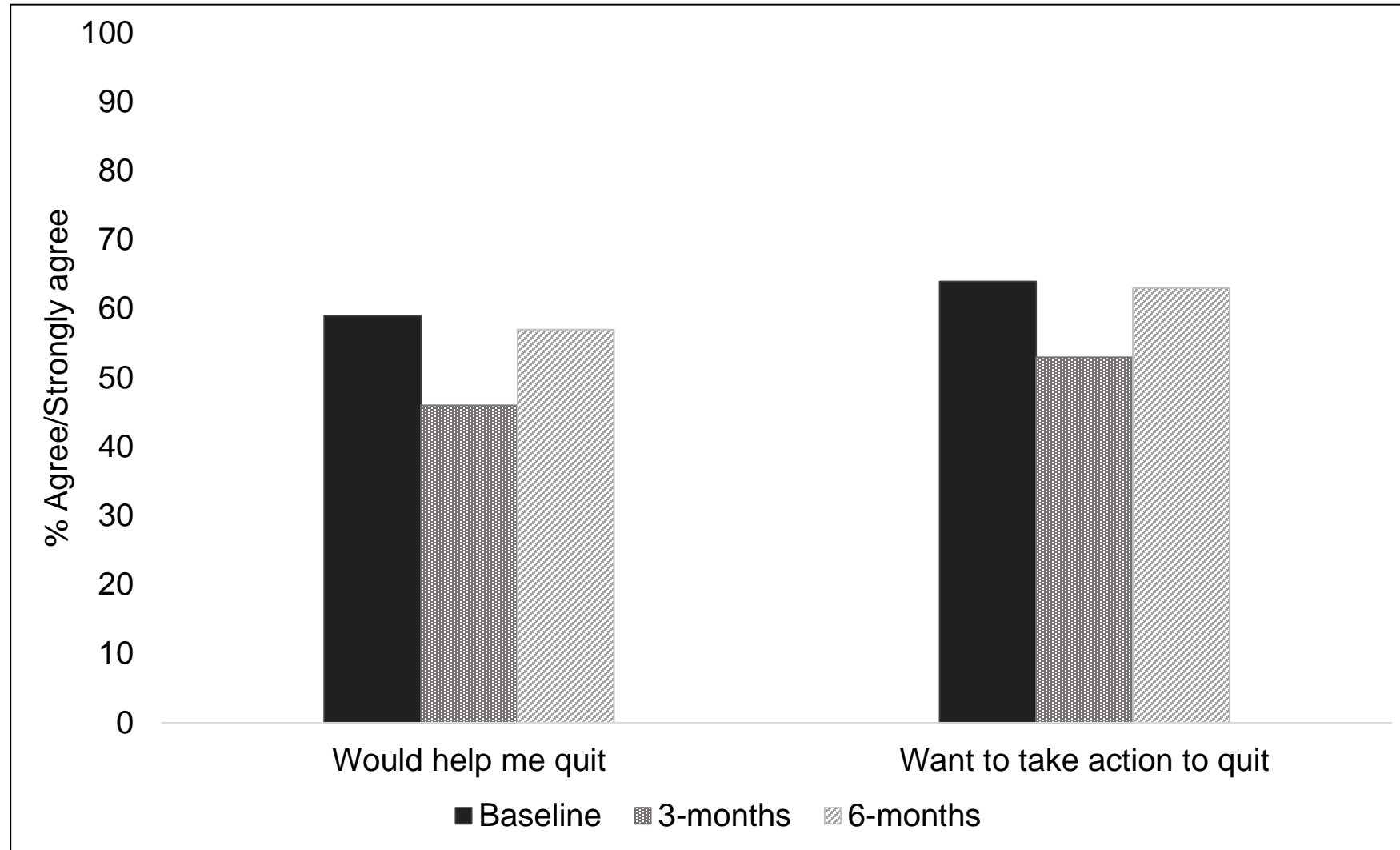
Affective and Cognitive Responses to Cigarette Graphic Warning Labels Among Low-Income Smokers: A Mixed Methods Study

- Explored affective and cognitive responses to the 2009 FDA-proposed graphic warning labels
 - Affect, efficacy, appeal and credibility at baseline, 3- and 6-months follow-up
- Recruited a sub-sample of those who completed the SFH intervention (n=23)
 - Conducted in-depth, semi-structured interviews on perceived efficacy of GWLs motivating cessation behaviors

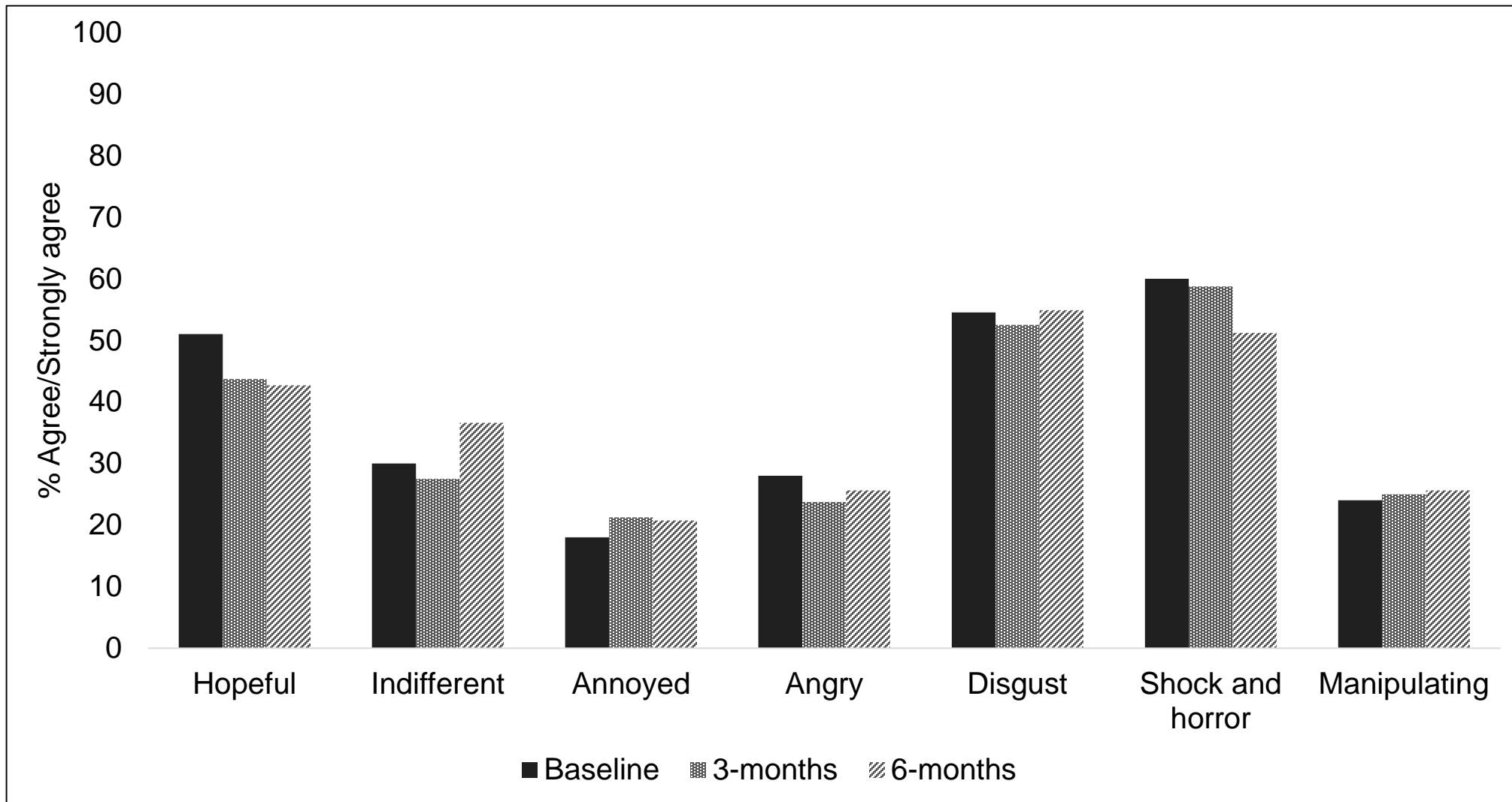
Appeal and credibility response to the GWLs



Efficacy response to the GWLs



Emotional response to the GWLs



Qualitative themes

Social context of tobacco use and cessation

- Family influences

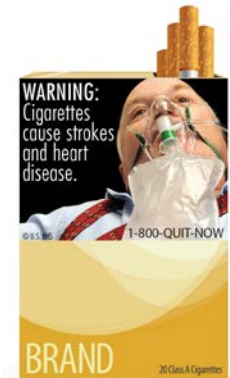
“It was just normal to me, I didn’t know anything else. So for me, seeing my parents smoking, that was just normal. I didn’t really associate it with, oh, smoking is bad, ‘cause my parents were doing it so it didn’t really... ‘cause if it was really bad, why would my parents do it, kind of thing.”

-- Female, 36 yo

Qualitative themes

General attitudes toward GWLs

- GWLs more impactful than current Surgeon General's text-only warning
- GWLs that elicited high-levels of emotion
 - Unequivocally depicted negative effects of smoking
 - Illustrated shock value
- GWLs that described impact of secondhand smoke
- GWLs that had a positive image of success with quitting



Qualitative themes

General attitudes toward GWLs

- *“It has to be more graphic – like the teeth, the cancer thing... For me, personally, the one with the hole – and the baby smoking – those ones will -- ooh, god, that’s horrible – more yellow fingernails and rotten teeth and – yeah, the lung thing and the baby smoking, that will work for them, too, but I don’t think the oxygen thing – not that graphic.”*

-- Female, 53 yo.

Qualitative themes

Affective and cognitive response to the GWLs

- Shock and disgust were the most commonly described responses
- A minority reported feeling annoyed or angry
 - Images were “overkill”
 - “Already knew that cigarettes were bad”
- Repeated exposure would not result in attention fatigue
 - Recommended rotating images

Qualitative themes

Affective and cognitive response to the GWLs

“Interviewer: Do you think that seeing these images, would they shock you every time you opened up your cigarette pack?”

*Participant: **They just throw it out there for three months, six months, and then take ‘em away, throw ‘em out there again like six months later...oh, my god, did you see that pack of cigarettes? So it keeps it in people’s minds fresh, and not just continuously – because you become anesthetized, you don’t even see that after a while”***

-- Female, 53 yo

Qualitative themes

Perceived efficacy of GWLs in motivating cessation behaviors

- Viewing GWLs would trigger negative affect that would motivate cessation
 - Remorse
 - Embarrassment

*“I think they [GWLs] would **make me feel really bad about my choice to smoke**, and that would make me **want to quit more**. I think it would eventually help me stop smoking. Possibly reduce smoking, but it would make me really want to quit.”*

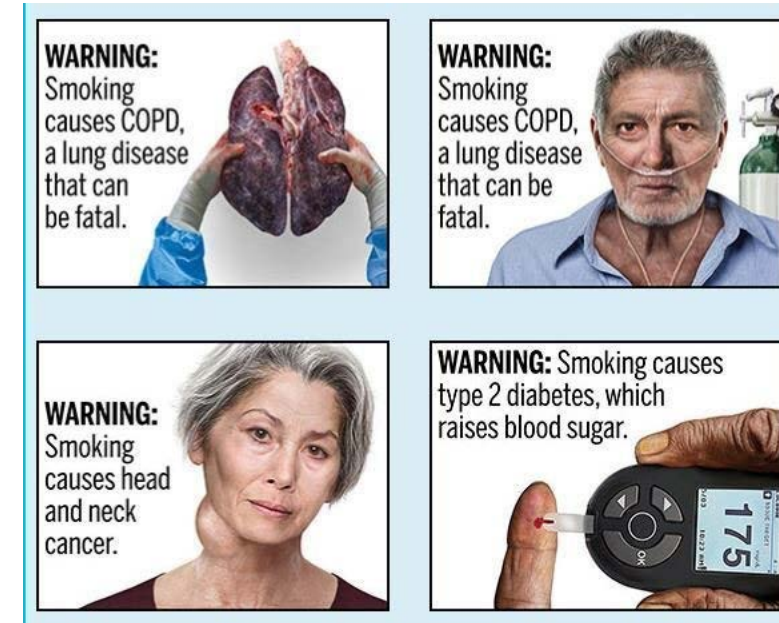
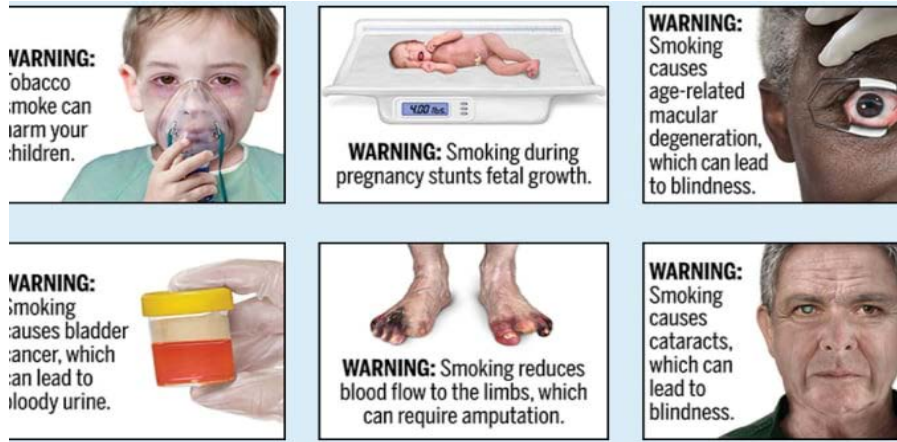
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Summary

- Preferred GWLs with higher shock value
- Perceptions of credibility were linked with tobacco-related risk appraisal
 - May motivate cessation behaviors
- Negative affect elicited by the GWLs may be necessary to increase impact of GWLs
 - Increased risk appraisal
 - Quit intentions
- Positive messages are also important and highlights the benefits of quitting

Implications

- FDA proposed new GWLs in 2019 – Final rule may be issued in March 2020



Tobacco cessation services should be integrated into services for homeless adults

- Smoke-free housing and cessation interventions are integral to providing quality housing
- Smoke-free homes may lead to
 - Downstream effect of smoking cessation
 - Social norm effect of other residents also adopting a smoke-free home
- GWLs has the potential to reach this population
 - May elicit negative affect that might motivate change in smoking behavior
- Policy interventions that have the potential to reach these populations broadly
- Help to reduce tobacco-related disparities

Q&A

- Submit questions via the **'Ask a Question' box**



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Call. It's free. It works.
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✓ Refer your clients to cessation services

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 - Webinar recording
 - PDF of the presentation slides
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 - Other resources as needed
- All of this information will be posted to our website!

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Save the Dates!

SCLC's next two live webinars will be with our partners at the **National Behavioral Health Network for Tobacco & Cancer Control (NBHN)** on Assisting Patients with Quitting:

- **Part 1 on Thursday, March 5th**
- **Part 2 on Monday, March 9th**
- More details and registration coming soon!



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