Smoking Cessation in those with Mental Health and Substance Use Disorders

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LOS ANGELES COUNTY DEPARTMENT OF
Mental Health
hope. recovery. well-being.

Disclosures

- No conflicts of interest to disclose

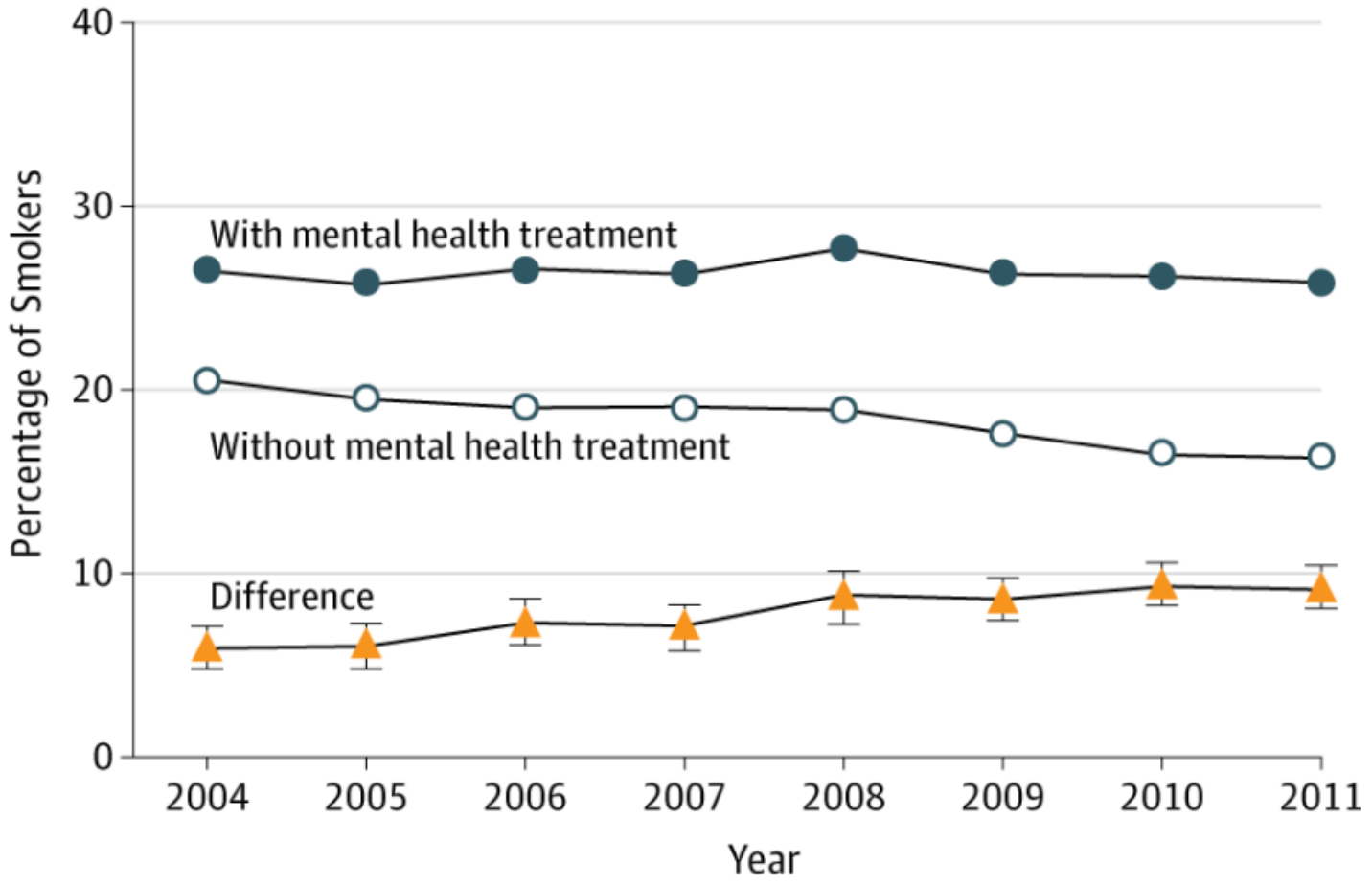
Smoking and mental illness

- **NESARC study:** Nicotine-dependent individuals with a comorbid psychiatric disorder made up 7.1% of the population yet consumed 34.2% of all cigarettes smoked in the United States *Grant et al. Arch Gen Psychiatry. 2004 Nov;61(11):1107-15*
- **NESARC study:** Mood, anxiety, personality and illicit substance use disorders were associated with significantly increased risk of persistent nicotine dependence

  Goodwin RD et al. Drug Alcohol Depend. 2011 Apr 21.
- **NCS study:** those with mental illness twice as likely to smoke but report lower quit rates, smoked 44% of all cigarettes consumed in US

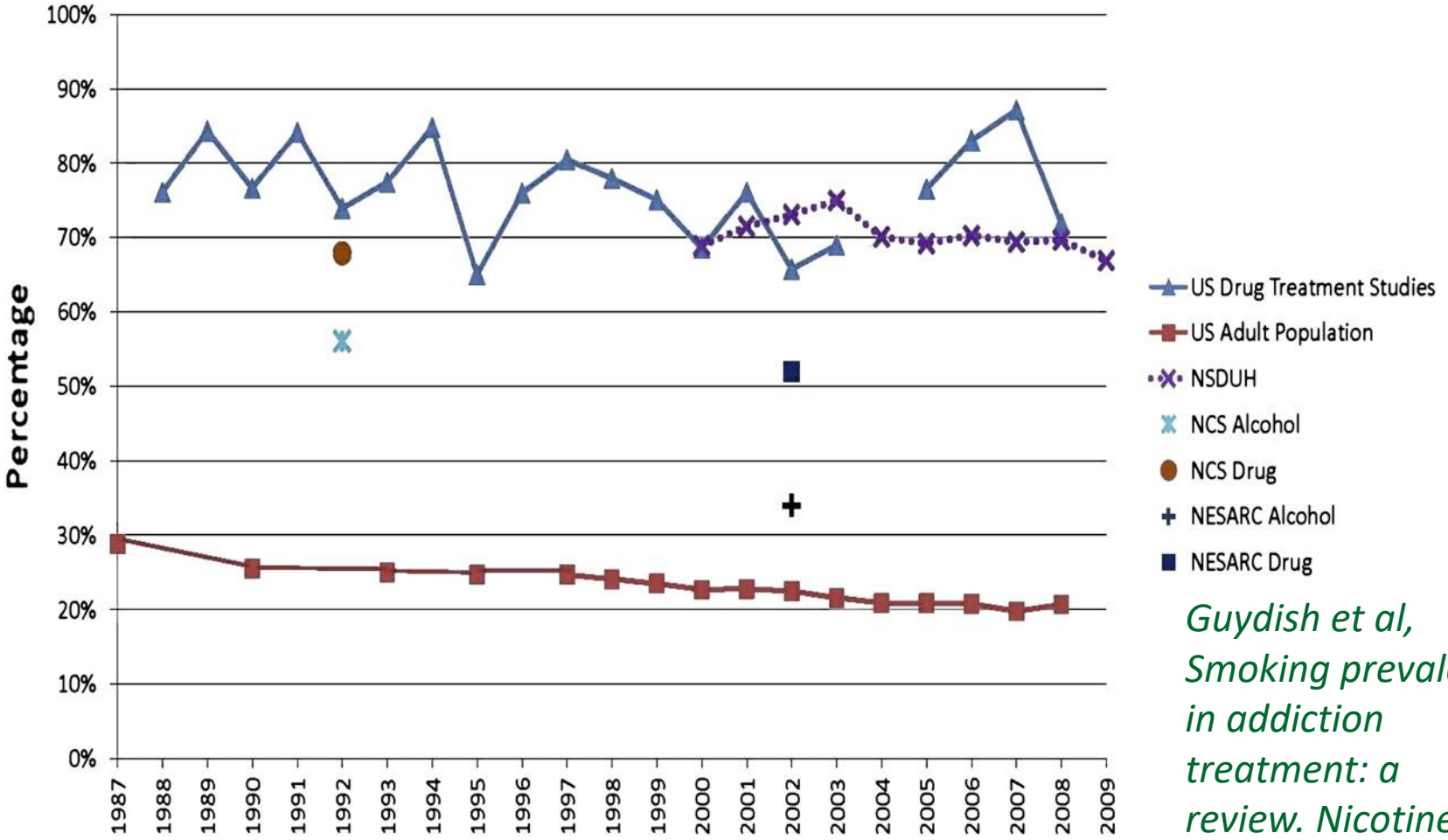
  Lasser K et al. JAMA. 2000 Nov 22-29;284(20):2606-10.

Smoking in Mental Health Populations



Lê Cook, B., Wayne, G. F., Kafali, E. N., Liu, Z., Shu, C., & Flores, M. (2014). Trends in smoking among adults with mental illness and association between mental health treatment and smoking cessation. Jama, 311(2), 172-182.

Smoking prevalence in 42 U.S. addiction treatment studies, in epidemiological reports, and in the U.S. population.



Guydish J et al. Nicotine Tob Res 2011;13:401-411

Guydish et al, Smoking prevalence in addiction treatment: a review. Nicotine Tob Res. 2011 Jun;13(6):401-11.

Nicotine & Tobacco Research

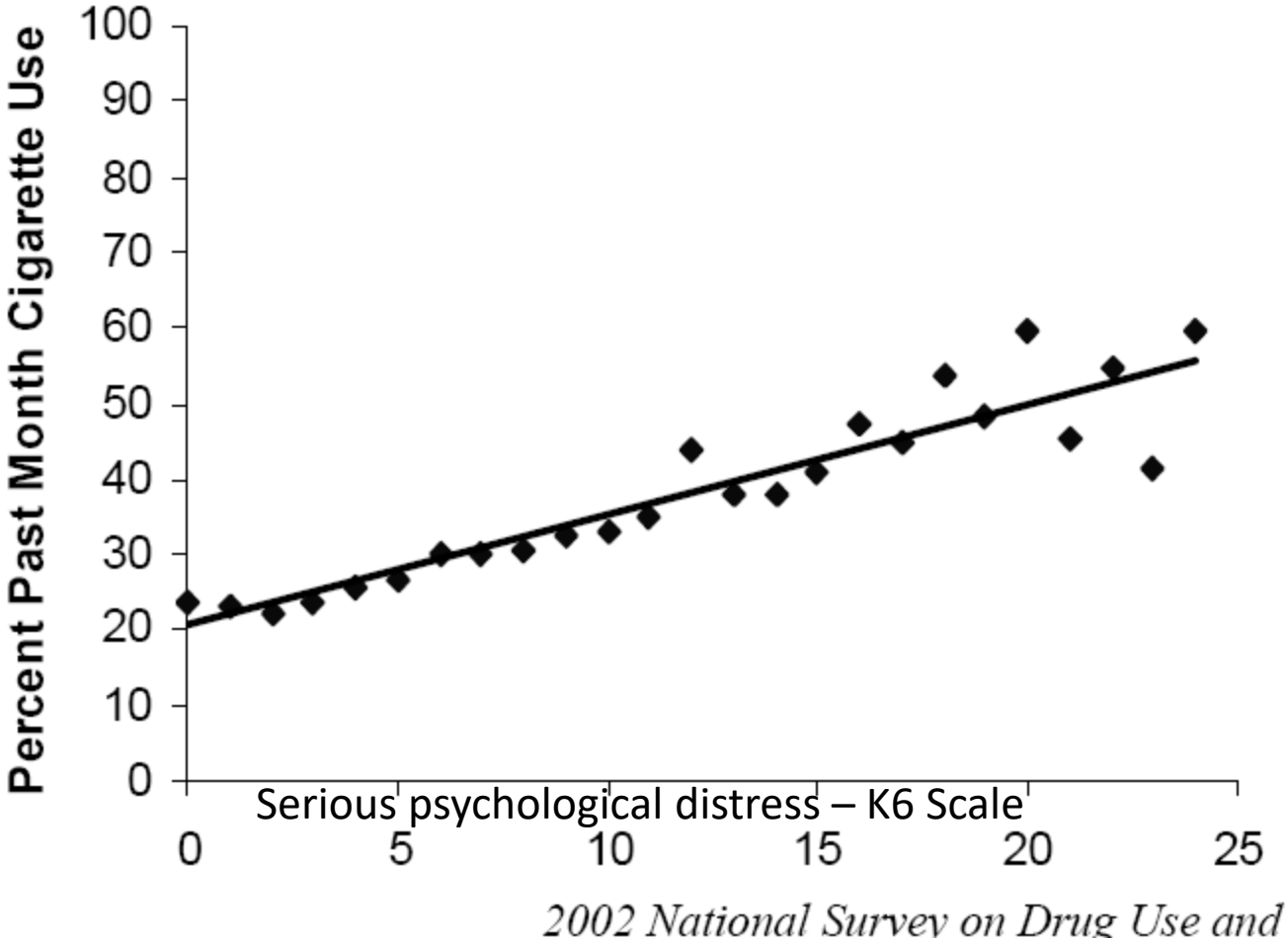
Smoking topography in schizophrenia

- >80% co-occurrence
- Time between puffs shorter by 6.5 secs
- More puffs per cigarette
- Greater peak flow (more intense inhalation) and higher volume puff
- Higher nicotine intake per cigarette and greater smoking per 24 hrs

Williams JM et al. Drug Alcohol Depend. 2011 May 17.

Tidey JW et al. Drug Alcohol Depend. 2005 Nov 1;80(2):259-65

Increased severity of SPD ↑ likelihood of being a current smoker



Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012

Smoking and psychotropics

- Polycyclic aromatic hydrocarbons induce hepatic enzymes to increase metabolism of many categories of medication, including antipsychotics, antidepressants and anxiolytics

Desai, Seabolt and Jann. 2001 CNS Drugs, 15, 469-494.

Smoking and psychotropics

P450 1A2 isoenzyme particularly affected:

haloperidol	amitriptyline
perphenazine	clomipramine
chlorpromazine	imipramine
fluphenazine	duloxetine
clozapine	mirtazapine
olanzapine	ropinirole
ziprasidone	ALL methylxanthines

http://www.psychresidentonline.com/CYP450 drug interactions.htm – Accessed 9/10/11 at 12:00pm

Co-occurring disorder smokers don't receive Rx for smoking cessation

- Nicotine Dependence documented in 2% of mental health records.
- Psychiatrists treat tobacco dependence in less than 2% of their outpatient practices.
- Psychiatrists have lowest awareness of Quitlines and state tobacco services.
- Less than 30% of state psychiatric hospitals offer cessation sessions.
- Less than half of outpatient substance abuse treatment programs offer smoking cessation counseling or pharmacoloy.

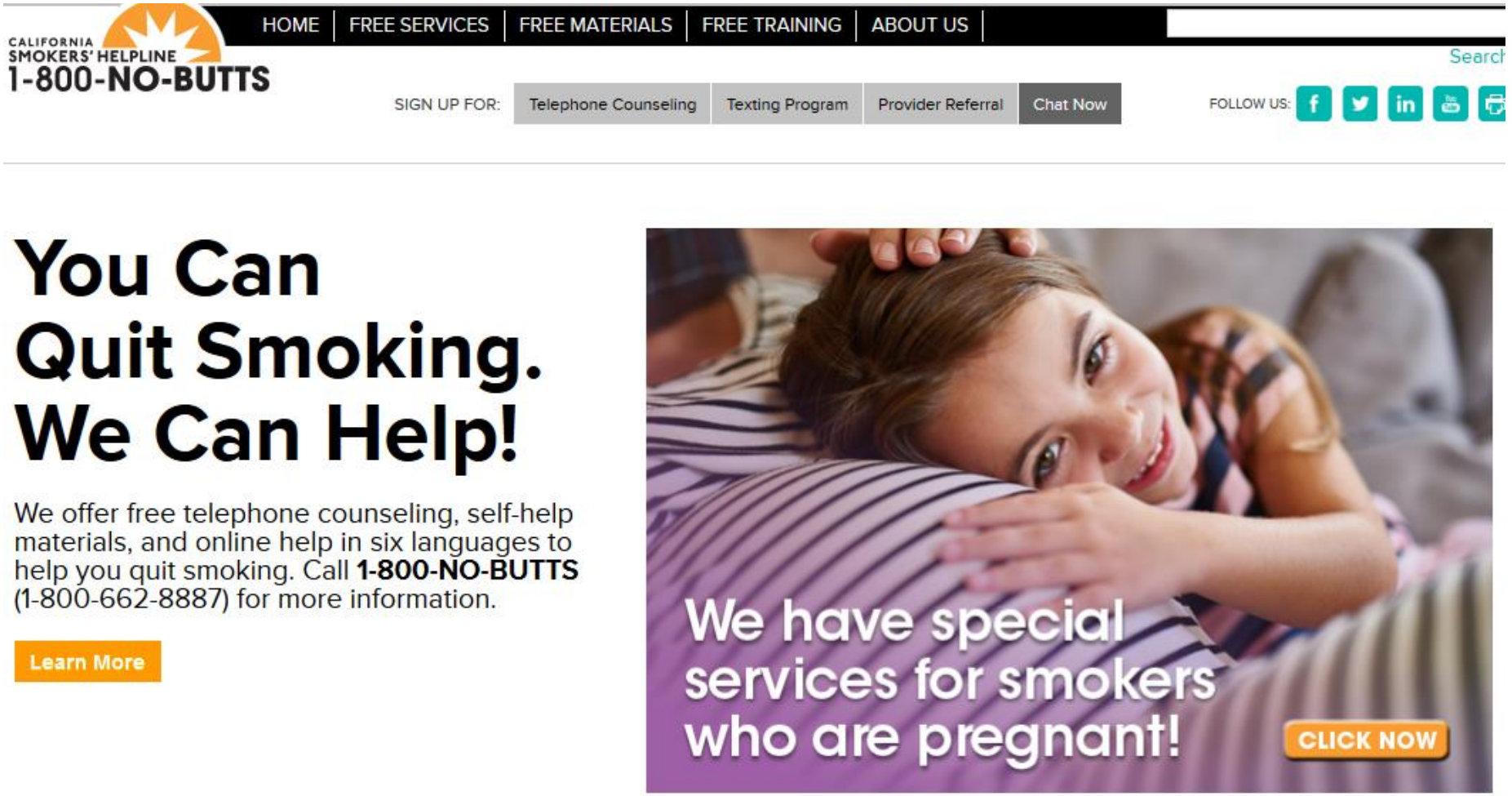
Peterson 2003; Montoya 2005; Friedman 2008; Steinberg 2006

Co-occurring disorder smokers don't receive Rx for smoking cessation

- Prospective evaluation of smoking status and quit attempts over 11 years in 174 community outpatients enrolled in longitudinal study
- 75% made at least one quit attempt over 11 years but none received NRT or bupropion
- Low quit success

Ferron JC et al. Psychiatr Serv. 2011 Apr;62(4):353-9

https://www.nobutts.org/



Cravings and relapse to smoking

- In an internet survey sample of 403 former smokers with 1-10 years abstinence, the most commonly endorsed triggers for craving were:
  - **DEPRESSED MOOD 47%**
  - SEEING SOMEONE SMOKING 43%
  - **ALCOHOL USE 37%**
  - BEING WHERE YOU USED TO SMOKE 32%

Hughes JR. Nicotine Tob Res. 2010 Apr;12(4):459-62.

- Having a mood or anxiety disorder worsens the subjective experience of nicotine withdrawal and increases the risk for craving-related relapse

Weinberger AH et al. Drug Alcohol Depend. 2010 Apr 1;108(1-2):7-12.

Smoking Cessation in MH Treatment

- Smoking cessation during mental health treatment:
- Reduced depression, anxiety, and stress
- Improved positive mood and quality of life
- Worked more effectively than antidepressants for mood and anxiety disorders

Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P. Change in mental health after smoking cessation: systematic review and meta-analysis. BMJ2014;348:g1151

Smoking in SUD populations

- The majority of patients enrolled in treatment for SUDs also smoke tobacco
- Smoking associated with poorer treatment outcomes compared to non-smokers
- Without smoking cessation treatment, smokers in SUD treatment do not reduce or quit smoking

McClure, Erin A., et al. Journal of substance abuse treatment 53 (2015): 39-46.

Smoking in SUD populations

- Meta-Analysis of Smoking Cessation Interventions With Individuals in SUD Treatment or Recovery:
- 25% increased likelihood of long-term abstinence from alcohol and illicit drugs.
- Smoking cessation interventions during addictions treatment enhanced long-term sobriety

Prochaska et al. Journal of Consulting and Clinical Psychology, Vol 72(6), Dec 2004, 1144-1156.

Smoking Cessation in SUD Treatment

- Smoking cessation during substance use disorder treatment:
- Does not impair outcome of the presenting substance abuse problem
- Enhances substance use disorder treatment outcomes

Baca, et al. Journal of substance abuse treatment 36.2 (2009): 205-219.

Smokers are more stress reactive

- Stress during nicotine abstinence results in reduced ability to resist smoking, and intensification of smoking pleasure

McKee SA et al.

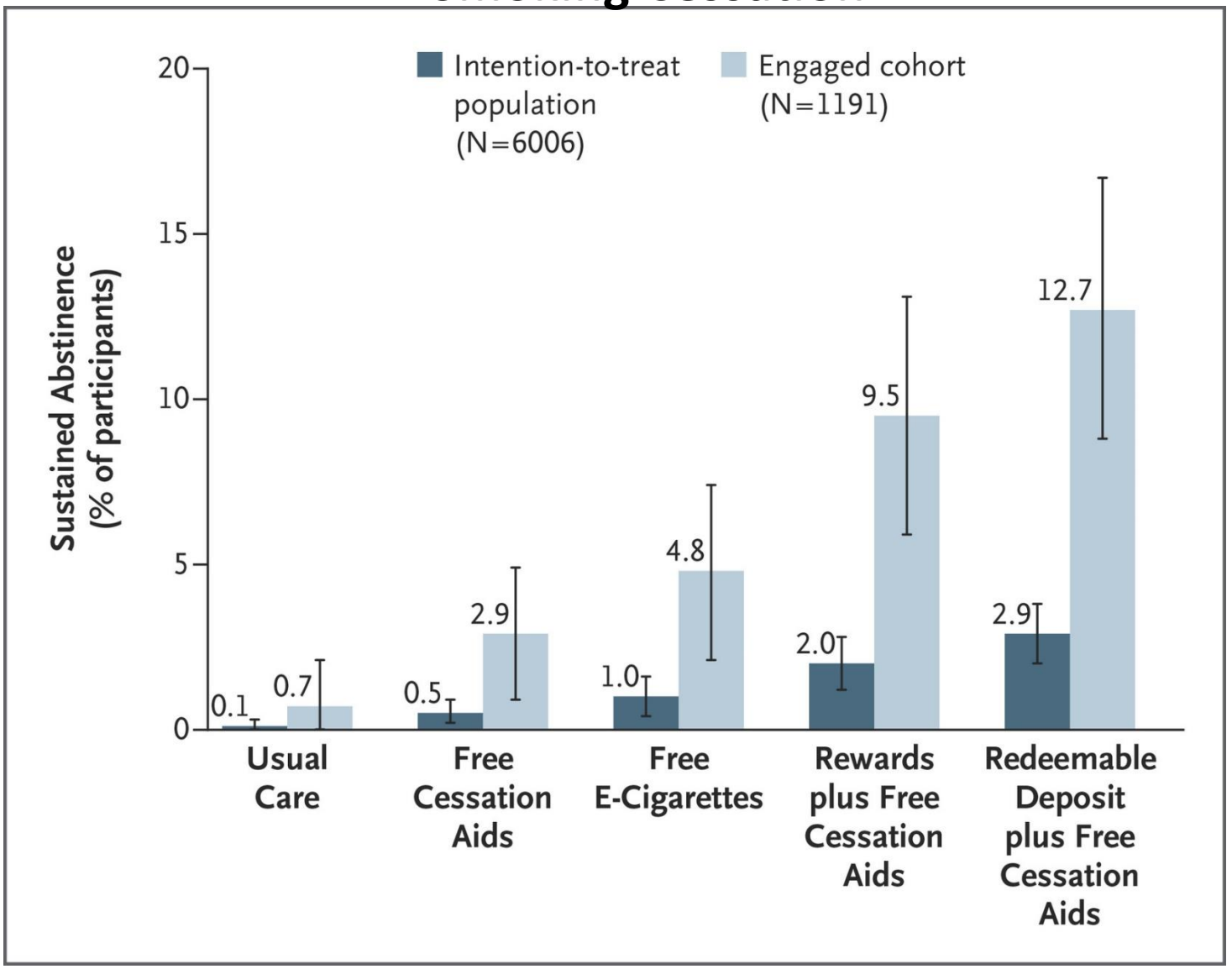
J Psychopharmacol. 2011 Apr;25(4):490-502.

Which Approach to Take?

- Evidence Based Practices
  - Telephone Counseling
  - Brief Strategies
  - Limited Insurance Coverage
  - Public Health Model
  - Primary vs. Behavioral Health
- Tailored Approach
  - Longer Treatment
  - Face to face
  - Expanded Medicare / Medicaid
  - Combinations
  - Clinical / co-occuring treatment model

Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012

A Pragmatic Trial of E-Cigarettes, Incentives, and Drugs for Smoking Cessation



Halpern, S. D., Harhay, M. O., Saulsgiver, K., Brophy, C., Troxel, A. B., & Volpp, K. G. (2018). A Pragmatic Trial of E-Cigarettes, Incentives, and Drugs for Smoking Cessation. *New England Journal of Medicine*. DOI: 10.1056/NEJMsa1715757

A Pragmatic Trial of E-Cigarettes, Incentives, and Drugs for Smoking Cessation

Table 3. Average Cost among All Participants and Cost per Successful Quit.*

Trial Group	Average Cost across Participants†	Cost per Successful Quit
	U.S. $ (95% CI)	*U.S. $*
Usual care‡	0.82 (0.29–1.67)	700.00
Free cessation aids	39.55 (26.76–56.30)	7,797.52
Free e-cigarettes	54.01 (36.09–77.82)	5,416.33
Rewards	72.65 (51.94–98.85)	3,623.13
Redeemable deposit	100.96 (76.82–128.80)	3,461.47

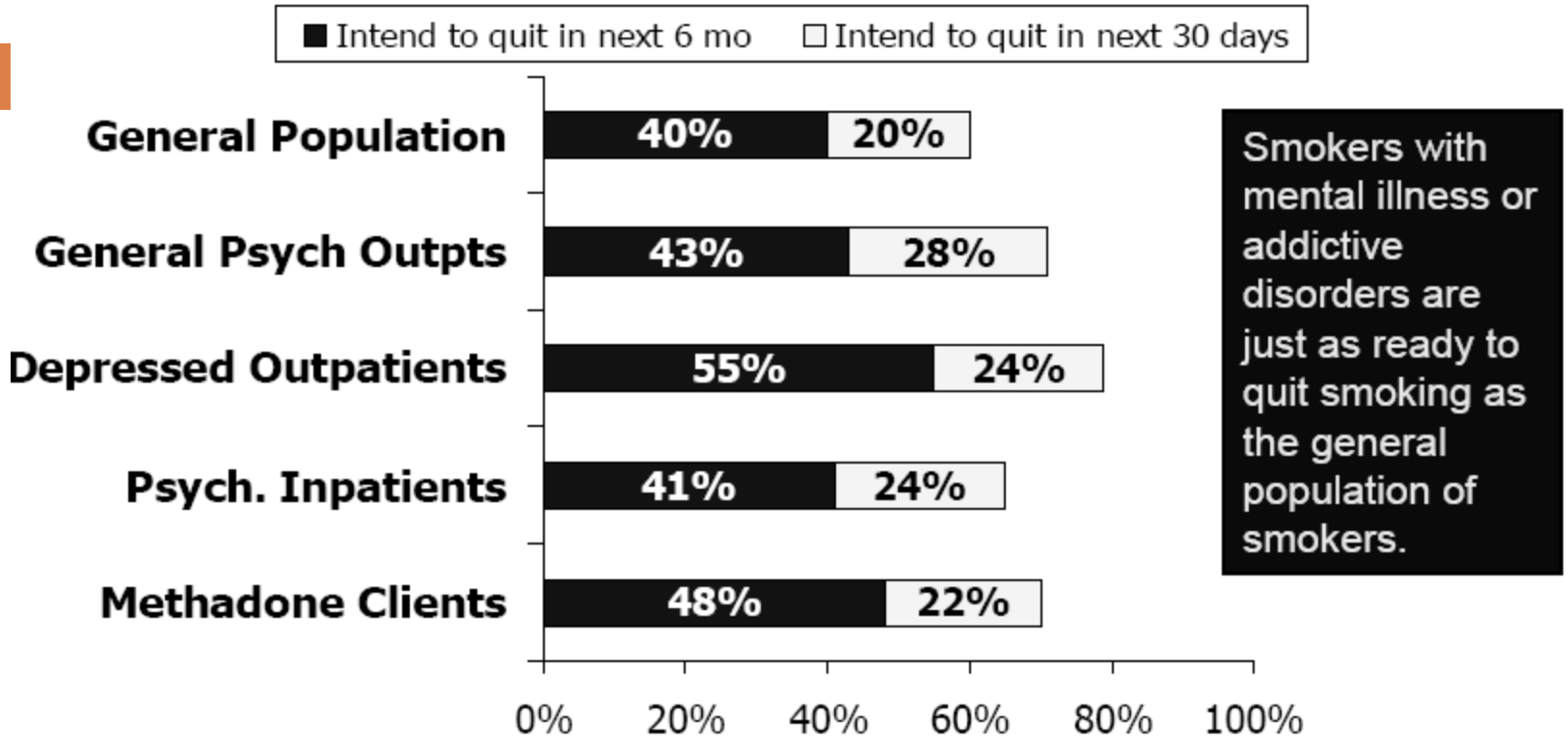
Halpern, S. D., Harhay, M. O., Saulsgiver, K., Brophy, C., Troxel, A. B., & Volpp, K. G. (2018). A Pragmatic Trial of E-Cigarettes, Incentives, and Drugs for Smoking Cessation. *New England Journal of Medicine*. DOI: 10.1056/NEJMsa1715757

Behavioral Health Should Take the Lead

- High prevalence of tobacco use disorders
- Tobacco Use Disorder is in the DSM
- Knowledge about addiction / co-occuring disorders
- Tobacco interactions with psychotropics
- Longer and more treatment sessions
- Experts in psychosocial treatment
- Tremendous patient need
- Relationship to mental symptoms

Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012

READINESS to QUIT in SPECIAL POPULATIONS



Slide Courtesy J Prochaska; Acton 2001; Prochaska 2004; Prochaska 2006; Nahvi 2006

Slide courtesy of Williams JM, 2012 AAAP Workshop on Tobacco Use and Cessation, December 7, 2012

People with behavioral health conditions are motivated to cease smoking

- Combined data from nine studies suggests:
  - More than half of all smokers may be contemplating quitting within 6 months or preparing to quit within 30 days.
  - Not dissimilar from general population.

Siru, Ranita et al. Addiction 104.5 (2009): 719-733.

Integrated care begins with brief interventions to assist motivation for

SMOKING CESSATION!

BRIEF INTERVENTIONS:

- The 5 A's:

Ask, assess, advise, assist, arrange

Feedback
Responsibility
Advice
Menu of options
Empathy
Self-efficacy/support follow up

- **State your conclusion and recommendations** unambiguously while highlighting autonomy

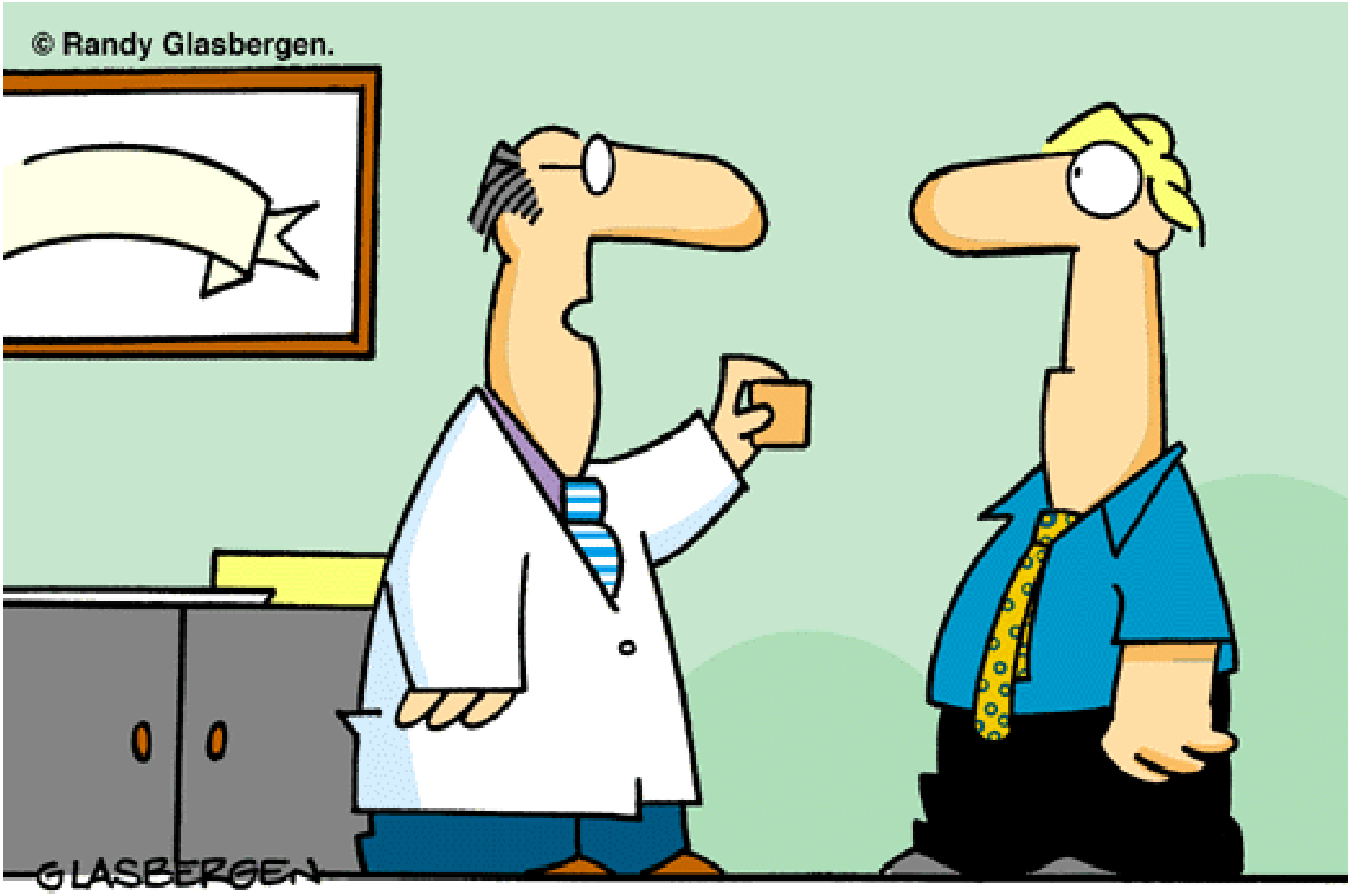
"You've noticed that you get winded more easily climbing stairs or walking distances, and we've discussed the risks of second-hand smoke exposure to your family and pets. *There is nothing but poison in cigarettes and the safest thing for your health is to stop smoking altogether*. But it's up to you, have you thought about quitting?"

image credit: Comstock

Medications for tobacco use disorder*

Nicotine replacement
Bupropion
Varenicline

*always paired with psychosocial support interventions



"I'm prescribing a patch to help you quit smoking. Wear it over your mouth."

NRT patch

- 7-28 mg available
- Produces steady nicotine levels which reduces cravings and withdrawal symptoms
- Take off at night (nightmares), skin irritation
- Have gum by bedside for early awakenings and before shower, put patch on after shower
- Easily comes off with sweat – have pts prepared with surgical tape and spare patches
- Can safely combine with gum/lozenge for breakthrough cravings (recommended)

NRT gum or lozenge

- 2 – 4 mg; replacement boxes cheaper than starter kits
- “chew and park” method – nicotine absorbed through cheek mucosa –”peppery” taste
- Some peak effects but less than inhaled
- Lozenges also available OTC in 2-4 mg
- Inhalers and nasal spray prescription only, disadvantages are more adverse events with spray and failure to break behavioral cues with inhaler

Bupropion XR (Zyban, Wellbutrin)

- Also an antidepressant, improves probability of quit success, may reduce weight gain
- Contraindicated in those with seizure disorder or predisposition to seizures (active bulimia nervosa) and also with bipolar I disorder patients
- Begin 1- 2 weeks before quit date: 150 mg daily x 3 days, then increase as tolerated to 300mg daily
- Warn about “jitters,” insomnia
- Can combine with NRT safely
- First-line for schizophrenia

Evins AE et al. (2007) J Clin Psychopharmacol. 27(4):380-6

Vareniciline (Chantix)

- Partial agonist at the nicotinic cholinergic receptor
- Provides mild activation while blocking exogenous nicotine from being able to activate receptor
- Abrupt discontinuation can result in mild withdrawal syndrome
- Begin 1 week before quit date:

  Days 1 – 3: 0.5 mg once daily

  Days 4 – 7: 0.5 mg twice daily

  Day 8 – End of treatment: 1 mg BID
- 12-24 weeks; nausea, insomnia, HA

PSYCHOSOCIAL INTERVENTIONS

- Group therapies (professional, peer support)
  - Engages group in problem-solving and supporting each other
  - Often paired with wellness teaching/program
  - Less flexible commitment
  - Nicotine Anonymous
  - Dual diagnosis
- Individual therapy
  - Personalized, more flexible, but no peer support
  - Mindfulness/meditation approaches being developed
- Telephone counseling
  - Convenient and personalized, but no peer support
- Online manualized treatment (internet interventions)
  - No solid evidence base

Resources: DO's and DON'Ts

- www.smokefree.gov
- http://www.nicotine-anonymous.org/
- http://smokingcessationleadership.ucsf.edu/BehavioralHealth.htm
- DON'T recommend:
- "light" cigarettes or "natural" cigarettes
- Smokeless tobacco (carcinogenic, just as addictive)
- SNUS: harm reduction vs. marketing for nicotine addiction?
  - PLoS Med. 2007 Jul;4(7):e185.
- E-cigarettes: antifreeze, expensive, not proven safe or effective Int J Gen Med. 2011 Feb 1;4:115-20.

PERSISTENCE

THANK YOU!