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# Treating Tobacco Use and Dependence

*Developed by*  
Center for Tobacco Cessation

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The following have nothing to disclose:

Chih-Wen Shi, MD

Carrie Costantini, MD

Gary Tedeschi, PhD

Kirsten Hansen, MPP

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# Faculty List

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# Objectives

The purpose of this course is to identify proven interventions for tobacco cessation to be offered during medical visits. As a result of this program, participants should be able to:

- Explain why tobacco use is the number one cause of preventable disease and death in the United States
- Describe the importance of treating tobacco use
- Describe usage patterns and define tobacco dependence
- Deliver effective and efficient clinical tobacco interventions to patients using systematic approaches

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# Needs Assessment and Target Audience

- The content of this webinar was determined by rigorous assessment of educational need and includes surveys, program feedback, expert faculty assessment, literature review, medical practice and new medical knowledge.
  - This webinar is designed for health care providers to address smoking cessation.
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# Cultural and Linguistic Competency

This activity is in compliance with California Assembly Bill 1195 which requires CME courses with patient care components to include curriculum in the subjects of cultural and linguistic competencies. Cultural competency is defined as a set of integrated attitudes, knowledge, and skills that enables health care professionals or organizations to care effectively for patients from diverse cultures, groups, and communities. Linguistic competency is defined as the ability of a physician or surgeon to provide patients who do not speak English or who have limited ability to speak English, direct communication in the patient's primary language. Cultural and Linguistic Competency was incorporated into the planning of this activity. Additional resources on cultural and linguistic competency and information about AB1195 can be found on the UCSD CME website at <http://cme.ucsd.edu>.

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# Treating Tobacco Use and Dependence

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# Annual U.S. Deaths Attributable to Smoking, 2000–2004

Percent of all smoking-attributable deaths

Cardiovascular diseases	128,497	29%
Lung cancer	125,522	28%
Respiratory diseases	103,338	23%
Other*	50,912	11%
Cancers other than lung	35,281	8%

**TOTAL: 443,595 deaths annually**

Source: Centers for Disease Control and Prevention. *MMWR* 2008;57(45) 1226-1228.

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# Second-hand Smoke

- 49,400 deaths annually are attributable to second-hand smoke exposure.
- Among the numerous diseases caused by second-hand smoke are heart disease, lung cancer, and SIDS.
- The Surgeon General has determined there is no safe level of second-hand smoke.

### The Smoker's Body

Every 10 seconds, someone dies from tobacco use, says the World Health Organization. Medical research suggests that those who start smoking in their teens (as 90 percent of smokers did) and continue for two decades or more will die 20 to 25 years earlier than those who never light up. And there is growing evidence that it's not always lung cancer or heart disease that kills them. Below, some of smoking's less publicized side effects—from head to toe.



- Hair Loss
- Cataracts
- Wrinkling
- Hearing Loss
- Skin Cancer
- Tooth Decay
- Osteoporosis
- Stomach Ulcers

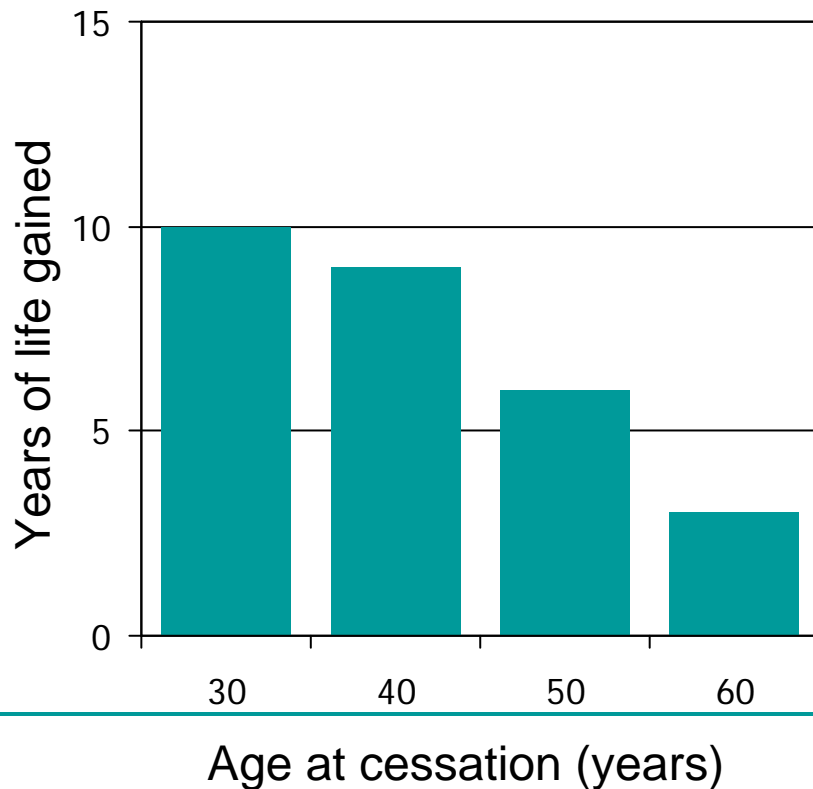
- Discolored Fingers
- Cervical Cancer
- Deformed Sperm
- Psoriasis
- Buerger's Disease

Source: World Health Organization

# Smoking Cessation

## Reduce the Risk of Death

- Prospective study of 34,439 male British doctors
- Mortality was monitored for 50 years (1951–2001)



**On average, cigarette smokers die approximately 10 years younger than do nonsmokers.**

**Among those who continue smoking, at least half will die due to a tobacco-related disease.**

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# Who Smokes?

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# Who smokes?

- California adult smoking prevalence is **13.3%\*** ~ 4 million smokers
  - American Indian – 28.2%\*\*
  - African American – 18.7%\*\*
  - White – 16.2%\*\*
  - Hispanic – 12.8%\*\*
  - Asian/Pacific Islander – 12.0%\*\*

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\* California Department of Health Services, 2007

\*\* California Health Interview Survey, 2005

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## Who smokes? (cont.)

- Lesbian/Gay/Bisexual/Transgendered – 30.4%
- Navy – 39.6%
- Marine Corps – 30.3%
- Low Socio-Economic Status – 19.2%

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# Who chews?

- California adult chew prevalence is **1.1%\*** ~ 300,000 chewers
  - Male – 97.8%\*
  - Female – 2.2%\*
  
  - White – 70.1%\*
  - Hispanic – 14.8%\*
  - African American – 8.3%\*
  - Asian/Pacific Islander – 4.6%\*
  - Other – 2.4%\*

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\* California Tobacco Survey, 2005

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# People with Mental Illness & Substance Use Disorders

- Rates of smoking are 2-4 times higher than among the general population.<sup>1</sup>
- About 41% of people with mental illness smoke.<sup>2</sup>
- 60% of current smokers report having had a mental health diagnosis sometime in their lifetime.<sup>1</sup>
- This population consumes 45% of cigarettes smoked.<sup>3</sup>
- Resource guides – [www.centerforcessation.org](http://www.centerforcessation.org)

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How many times does it take  
to quit for good?

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# How many times does it take to quit for good?

- Answer: 12 – 14 attempts on average\*
- What does this mean?
  - It's hard to quit, but it is possible.

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\* Zhu (Sept., 2007) Oceania Tobacco Control Conference, Auckland, NZ.

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# Why is it hard to quit?

## ➤ Physiological dependence

- Nicotine stimulates release of chemicals in the brain:
  - » acetylcholine, dopamine, glutamate, endorphins, norepinephrine, & serotonin.
- Quitting leaves the brain & body wanting nicotine to feel normal again.

## ➤ Psychological dependence

- Ambivalence
  - Habit/routine
  - Utility (e.g., manage stress, increase concentration)
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# Keys to Success

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# Keys to Success

- Motivation + Planning = Success
  - Multiple quit attempts
    - No one method works for everyone
    - But some method will work
  - Slip versus relapse
    - Getting back on track right away is most important
  - Nonsmoker self-image
    - View self as a nonsmoker versus a smoker who is abstaining
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# The Health Care Provider's Role

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# Clinical Practice Guidelines

- Comprehensive, evidence-based approach for smoking cessation
  - Released in June 2000 by the U.S. Public Health Service - updated in 2008
  - Systematic approach to tobacco for all healthcare facilities
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# Evidence-Based Model: The 5 A's

**Ask:** Systematically identify all tobacco users at every visit

**Advise:** Advise tobacco users to quit

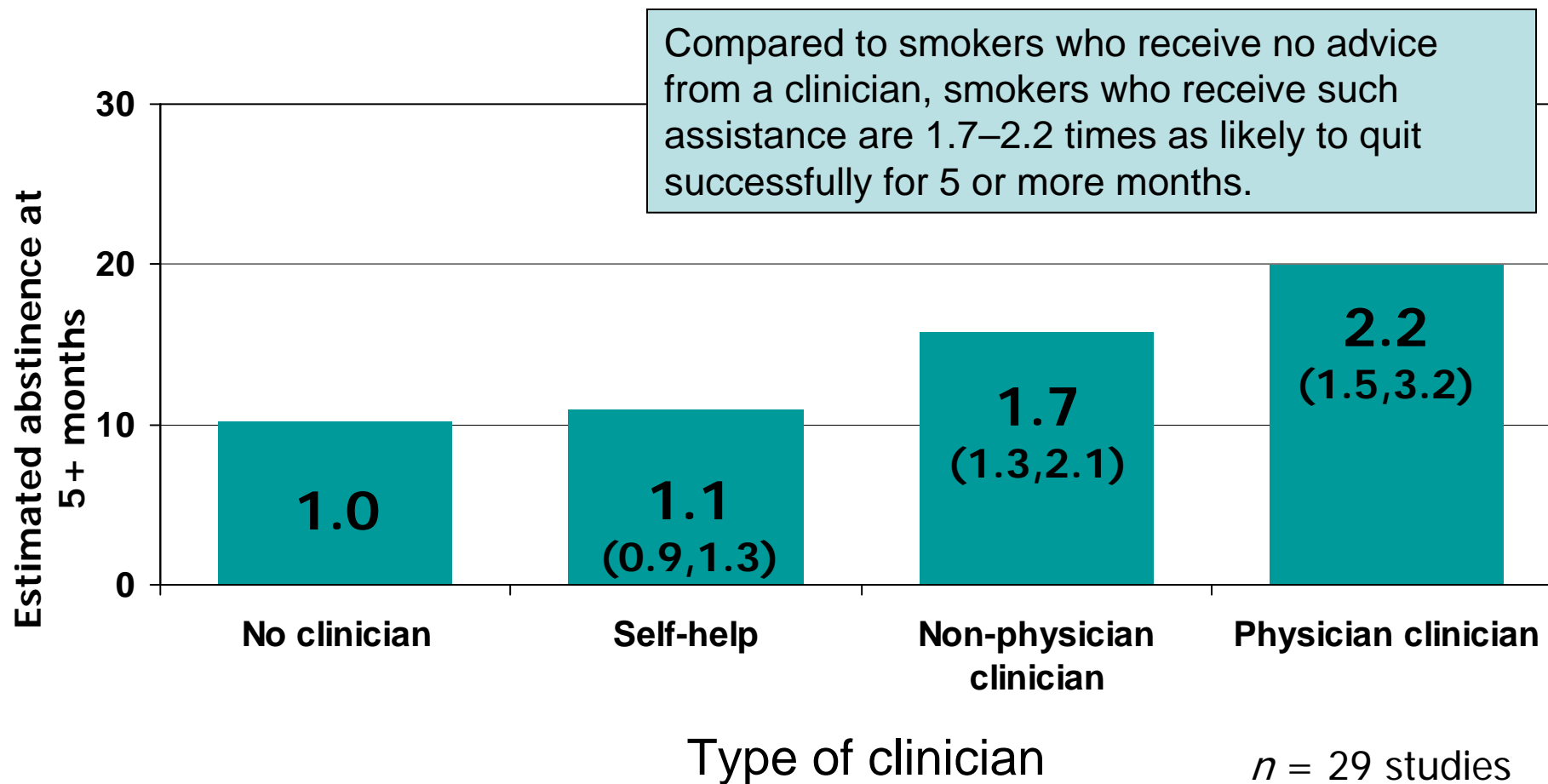
**Assess:** Assess each tobacco user's willingness to quit

**Assist:** Assist tobacco users with a quit plan

**Arrange:** Arrange follow-up contact

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# Effects of Clinician Advice



Source: Fiore et al. *Treating Tobacco Use and Dependence. Clinical Practice Guideline*. USDHHS, PHS, 2000.

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# Nursing Interventions

## ➤ Cochrane review

- included randomized trials of smoking cessation interventions delivered by nurses or health visitors with follow up of at least six months.

## ➤ 31 studies comparing a nursing intervention to a control or to usual care found the intervention to significantly increase the likelihood of quitting (RR 1.28, 95% CI 1.18 to 1.38).

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# Health Care Provider Advice and Referral Rates

- Only 62% of smokers were advised by a doctor to quit
- Only 33% were advised to quit and referred to a program by a doctor during the past 12 months.

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# Barriers to Using the 5 A's

- Time
  - Respect for privacy
  - Support
  - Expertise
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# Team Approach

- Amended 5 A's for those who don't have time or resources
  - **A, A, R**
    - **Ask**
    - **Advise**
    - **Refer**
-

# The 5 A's and A, A, R

**Ask:** Systematically identify all tobacco users at every visit

**Advise:** Advise smokers to quit

**Assess:** Assess each smoker's willingness to quit → **Refer** to the California Smokers' Helpline

**Assist:** Assist smokers with a quit plan → The Helpline provides behavior modification counseling (quit plan and quit date)

**Arrange:** Arrange follow-up contact → The Helpline provides 5 follow-up calls – timing is based on the probability of relapse.

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# Ask about tobacco use

- Identify tobacco users
  - Ask every patient, every time

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# Gauge Dependence & Readiness

## ➤ Dependence

- How soon after waking do you smoke?
- How many cigarettes do you smoke each day?
  - » Low dep. (< 10 cpd; no smoke in 1<sup>st</sup> hour of waking)
  - » Mod. dep. (10-20 cpd; no smoke in 1<sup>st</sup> 30 min. of waking)
  - » High dep. (>20 cpd; smoke within 30 minutes of waking)

## ➤ Readiness

- On a scale of 0-10 how important is it to you to quit?
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# Advice tobacco users to quit

## ➤ Recommend quitting

- “As your clinician, I want you to know that quitting smoking is the most important thing you can do to protect your health.”



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# Patients Not Ready to Quit

- Let them know you care about their well-being **and** you think it is important
    - People respect the opinion of health care providers
  - Meet patients where they are at
    - Cessation is a long-term not short-term goal
  - Ask on a future visit
    - Persistence is more important than intensity
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# Motivational Interviewing

- Developed by William Miller & Stephen Rollnick
  - Born from alcohol dependency counseling
  - Not overtly confrontational or directive
  - Patients experience being guided in their own decision making, not “counseled” or told what to do.
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# Goals of Motivational Interviewing

- Reduce harmful behavior
  - Explore & resolve ambivalence about change
  - Increase self-efficacy for change
  - Elicit “change talk”
  - Guide client in own decision making
  - Empower client to choose change
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# MI in the Medical Setting

- Assess smoker's receptivity
  - Convey support in a respectful, nonjudgmental manner
  - Ask evocative questions
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# Sample Evocative Questions

- What worries you about your tobacco use?
  - What has smoking stopped you from doing?
  - What do you think will happen if you don't make a change?
  - What would it take for you to feel ready to quit?
  - What do you think will work for you?
  - What is the worst that could happen (worst fear) if you don't quit?
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# MI in the Medical Setting

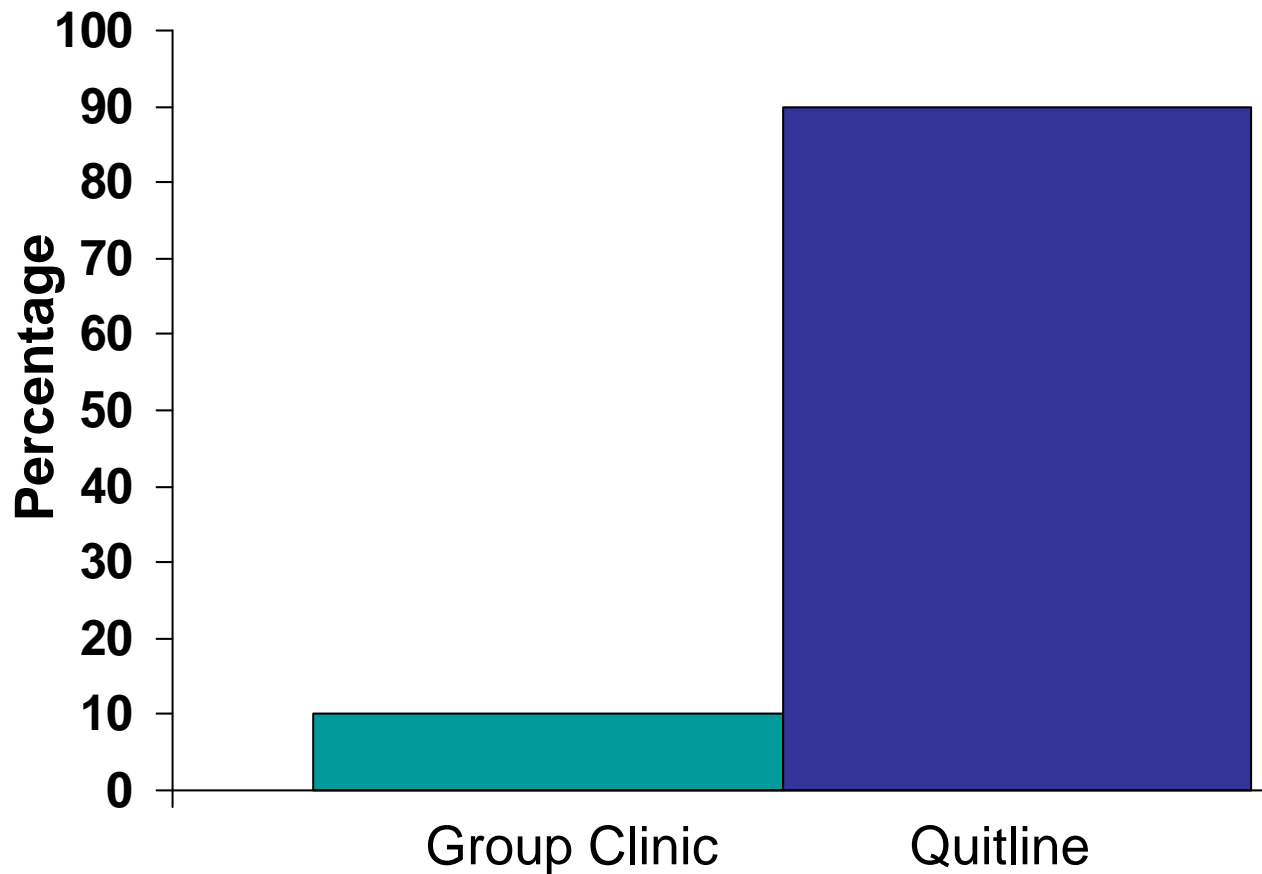
- Assess smoker's receptivity
  - Convey support in a respectful, nonjudgmental manner
  - Ask evocative questions
  - Consider providing physiologic feedback (e.g., patient's expired carbon monoxide level, lung capacity)
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# Refer-tobacco users to other resources

- People who receive assistance are more likely to quit successfully
    - A toll-free telephone quitline:  
**1-800-NO-BUTTS (1-800-662-8887)**
    - An individual or group counseling program in the community
    - Consider medication options
    - The support program provided free with most smoking cessation medications
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# Smokers Prefer Quitlines



Source: McAfee (2002), North American Quitline Conference

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# California Smokers' Helpline

## 1-800-NO-BUTTS

- Free statewide tobacco cessation program
  - Funded by tobacco taxes
    - Propositions 99 & 10
  - Scientifically proven to be effective
  - All services available by telephone
  - In operation since 1992
  - Adults, teens, pregnant women and proxy
  - Multiple languages
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# Multiple Languages

- English  
1-800-NO-BUTTS (1-800-662-8887)
  - Cantonese  
1-800-838-8917
  - Korean  
1-800-556-5564
  - Mandarin  
1-800-838-8917
  - Spanish  
1-800-45-NO-FUME (1-800-456-6386)
  - Vietnamese  
1-800-778-8440
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# What Happens in Each Call?

## ➤ Initial session

- Comprehensive, 30-40 min. call
- Preparation to quit
- Setting a quit date

## ➤ Follow-up sessions

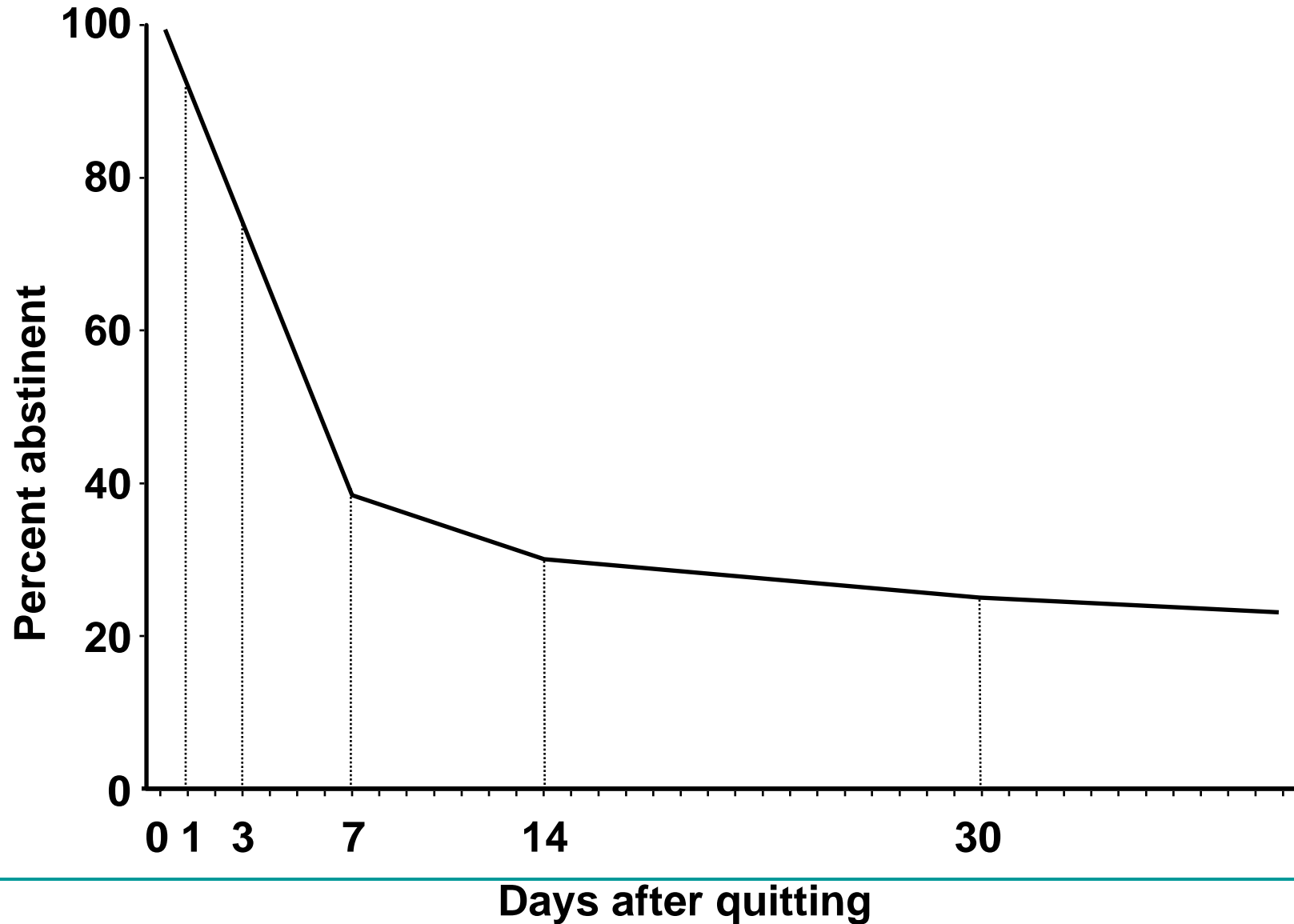
- 10-15 min. calls
  - Relapse prevention
  - Medication review
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# Helpline Intervention Summary

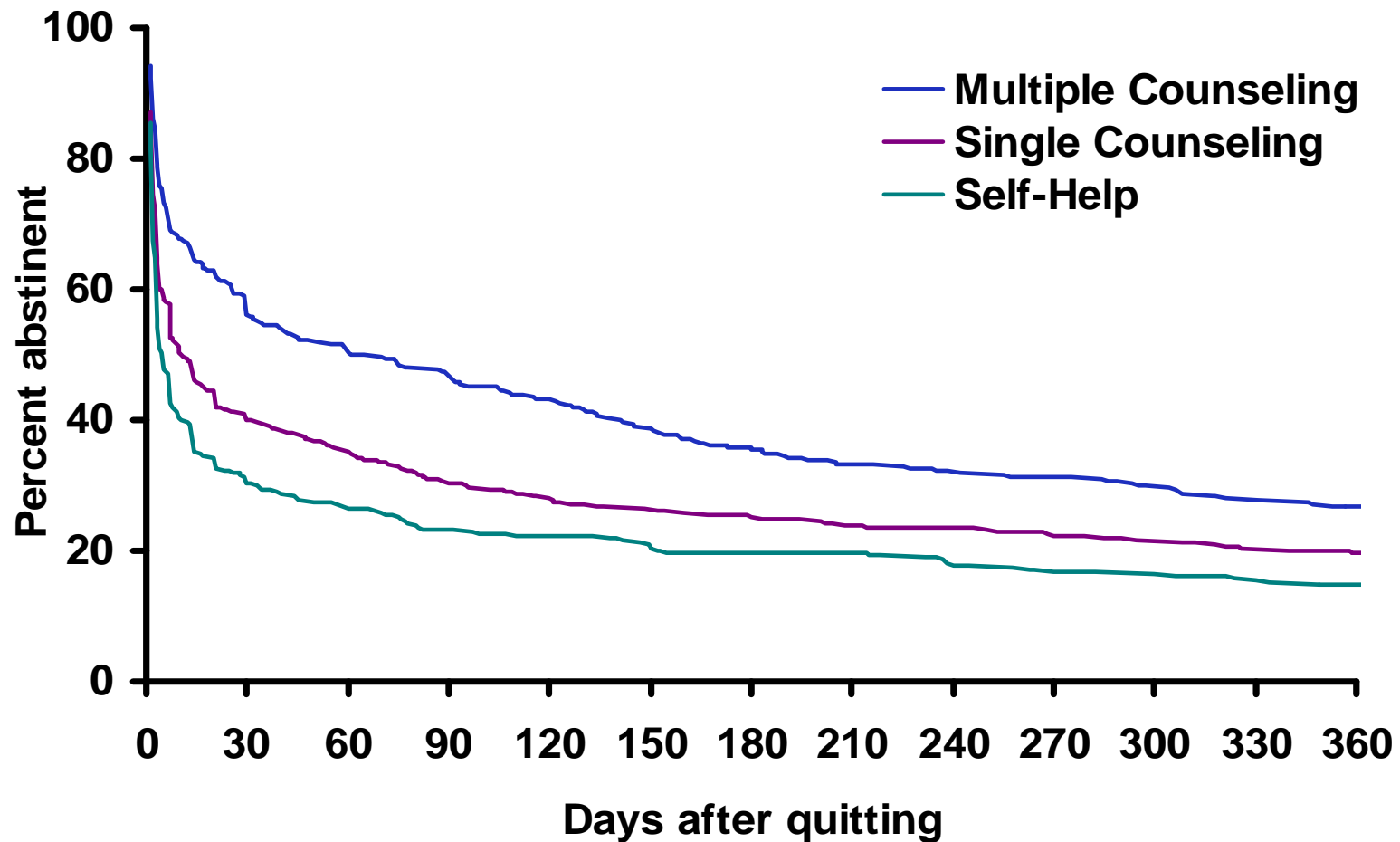
- Identify a strong reason (Motivation)
  - Bolster belief in ability (Confidence)
  - Develop a solid plan (Skills)
  - Adopt a new view of self (Self-image)
  - Keep trying (Perseverance)
-

# Relapse-Sensitive Scheduling



Source: Zhu & Pierce (1995), *Prof. Psych. Res. & Practice*, 26, 624-625

# Relapse Curves for 3 Groups



Data source: Zhu et al. (1996), *JCCP*, 64, 202-211

# Pharmacotherapy Options

<b>Nicotine Replacement Therapy</b>	<b>Other Medication</b>
Patches (OTC)	Bupropion SR (Zyban)
Gum (OTC)	Varenicline (Chantix)
Lozenges (OTC)	
Inhaler (Rx)	
Spray (Rx)	

# Nicotine Replacement Therapy

- Used to help smokers get off nicotine slowly. Nicotine is released into the bloodstream (via the type of NRT) in order to help reduce physical withdrawal symptoms.
- NRT works by replacing some of the nicotine from smoking at the receptor sites with nicotine from less harmful sources.
- **Contraindications** include: pregnancy or nursing, recent heart attack, irregular heart beat, severe or worsening heart pain, stomach ulcers, overactive thyroid, high blood pressure, diabetes requiring insulin.
- Reduced efficacy for women at standard doses (metabolism).

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# Bupropion (Zyban/Wellbutrin S-R)

- Bupropion (Zyban) is a non-nicotine prescription drug, the sustained-release form of the antidepressant Wellbutrin.
    - The “pill” is thought to stimulate dopamine and norepinephrine, brain chemicals that give smokers the sensation of alertness & energy.
    - Reduces the withdrawal symptoms such as cravings, irritability and depressed mood.
    - Works equally well for men and women.
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# Varenicline (Chantix)

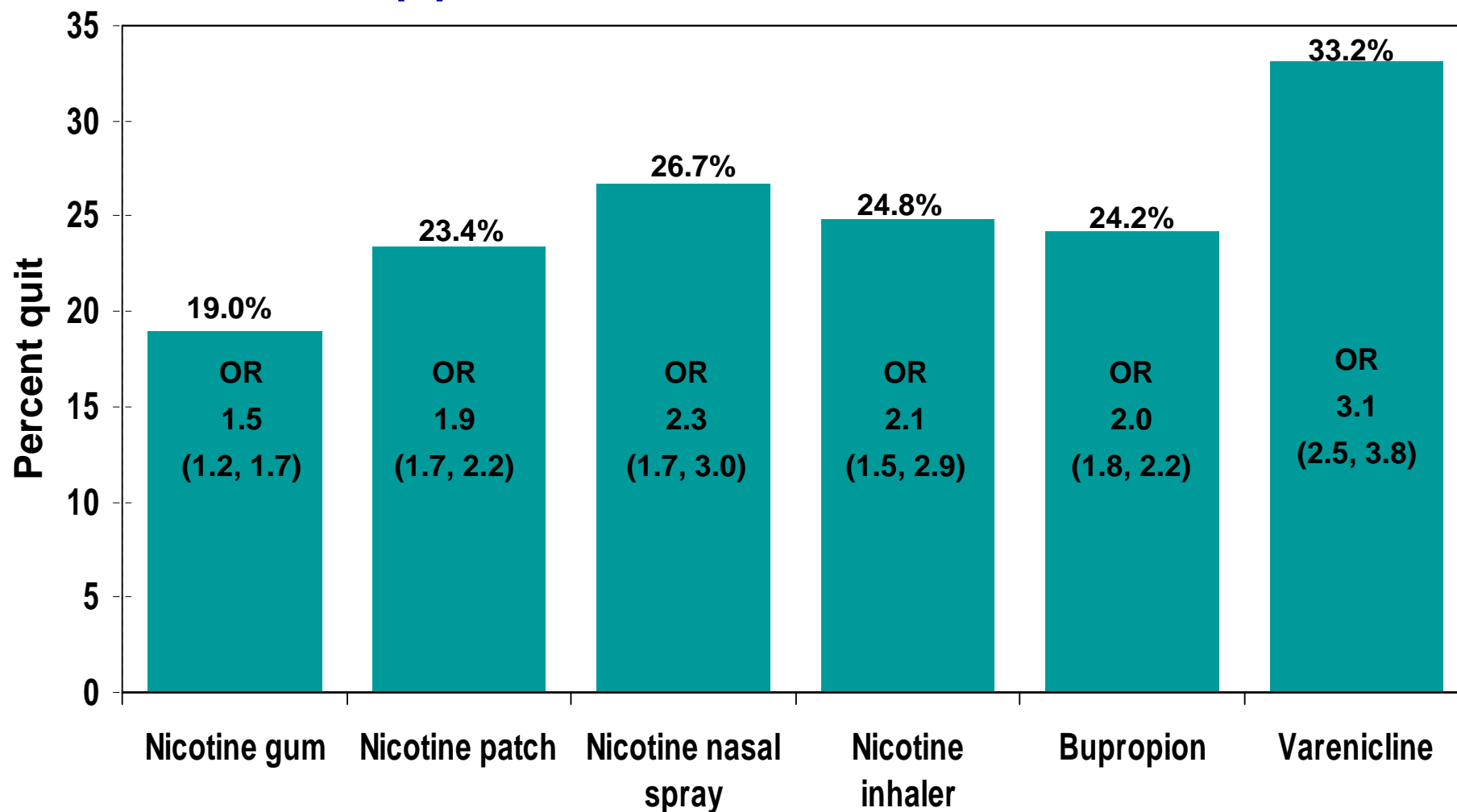
- Varenicline (Chantix) is a non-nicotine prescription drug developed specifically for smoking cessation. Not an antidepressant.
    - The “pill” releases Dopamine but substantially less than with smoking.
    - Varenicline specifically targets the alpha-4 beta-2 ( $\alpha 4\beta 2$ ) nicotinic receptors, blocking the binding of nicotine from smoking.
    - Reduces the urge to smoke and reduces the pleasure derived from smoking.
    - Works equally well for men and women.
-

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# Varenicline (Chantix)

- Post-marketing reports of adverse mood and behavior changes.
  - Available research data has been reviewed and causal links have not yet been established.
  - New warnings are for both patients and providers to closely monitor psychiatric symptoms of anyone taking varenicline to stop smoking.
  - Studies underway to test varenicline in patients with MI.
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# Six Month Point Prevalence Quit Rates for FDA-Approved Cessation Medications



Nicotine lozenge: (single study results) 2 mg = OR 2.0 (1.4, 2.8) 4 mg = OR 2.8 (1.9, 4.0)

Source: *Treating Tobacco Use and Dependence: 2008 Update*. Public Health Service. May 2008

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# On the Horizon: Nicotine Vaccine

- In early development. Will take several more years.
  - Works by stimulating immune system to produce antibodies to nicotine + protein molecule
  - Antibodies then bind to any nicotine in bloodstream; can't pass the blood/brain barrier
  - Effects of nicotine can't reach brain
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# Coverage for Tobacco Dependence Treatments

- Health insurance coverage and requirements vary by plan
- Medi-Cal provides FREE pharmacotherapy with:
  - Certificate of enrollment in behavior-modification, e.g. 1-800-NO-BUTTS
  - Prescription
- Medicare
  - Prescription drug benefits – Part D
  - Reimburses for cessation counseling – CPT Codes
    - 99406 (3-10 minute intervention)
    - 99407 (>10 minute intervention)

**For more information visit:**

**[www.californiasmokershelpline.org/quittingaids.shtml](http://www.californiasmokershelpline.org/quittingaids.shtml)**

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# Summary

- Clinician advice – you make a difference
- Quit attempts – they can be successful
- Referral – you don't have to do it all
- Benefits – you and your patients will be more satisfied

“You miss 100% of the shots you never take.”

Wayne Gretzky

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# Contact

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