

Evidence-Based Tobacco Use Treatments

A Resource for VHA Psychology Trainees – Part I

AUGUST 2012

CPH

Clinical Public Health



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Portions of this program were adapted, with permission, from the Rx for Change: Clinician-Assisted Tobacco Cessation program

Clinical Public Health Tobacco Use Cessation Program Curriculum Committee:
Jeannie Beckham, Ph.D. Timothy Carmody, Ph.D.,
Timothy Chen, Pharm.D., Dana Christofferson, Ph.D.,
Judith Cooney, Ph.D., Margaret Dundon, Ph.D.,
Steven Fu, MD, MSCE, Kim Hamlett-Berry, Ph.D., Miles McFall, Ph.D.

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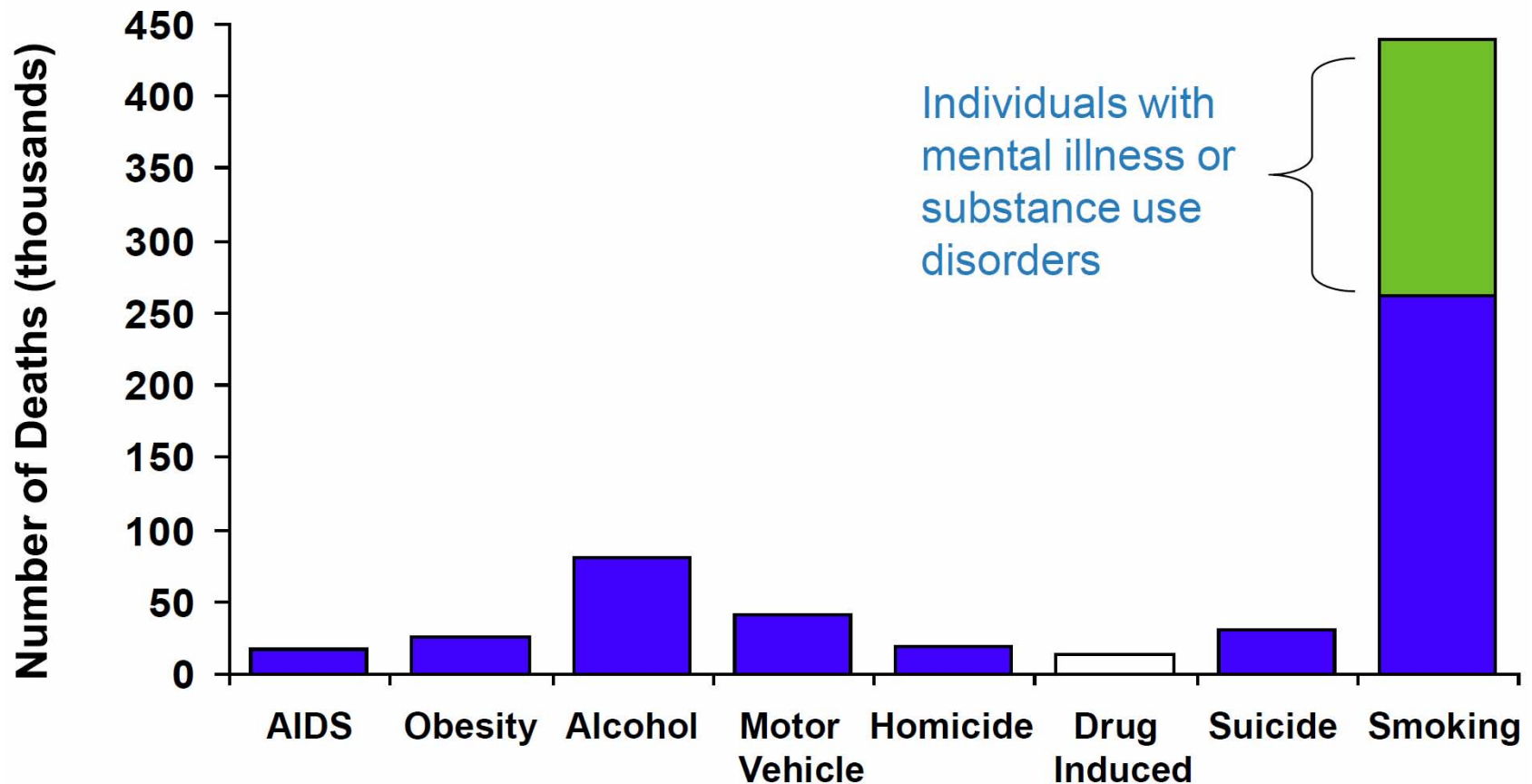
OVERVIEW—First Hour

- Epidemiology and Burden of Tobacco Use
- Evidence-based Treatment:
 - Clinical Practice Guidelines
 - Behavioral Interventions
 - Pharmacotherapy

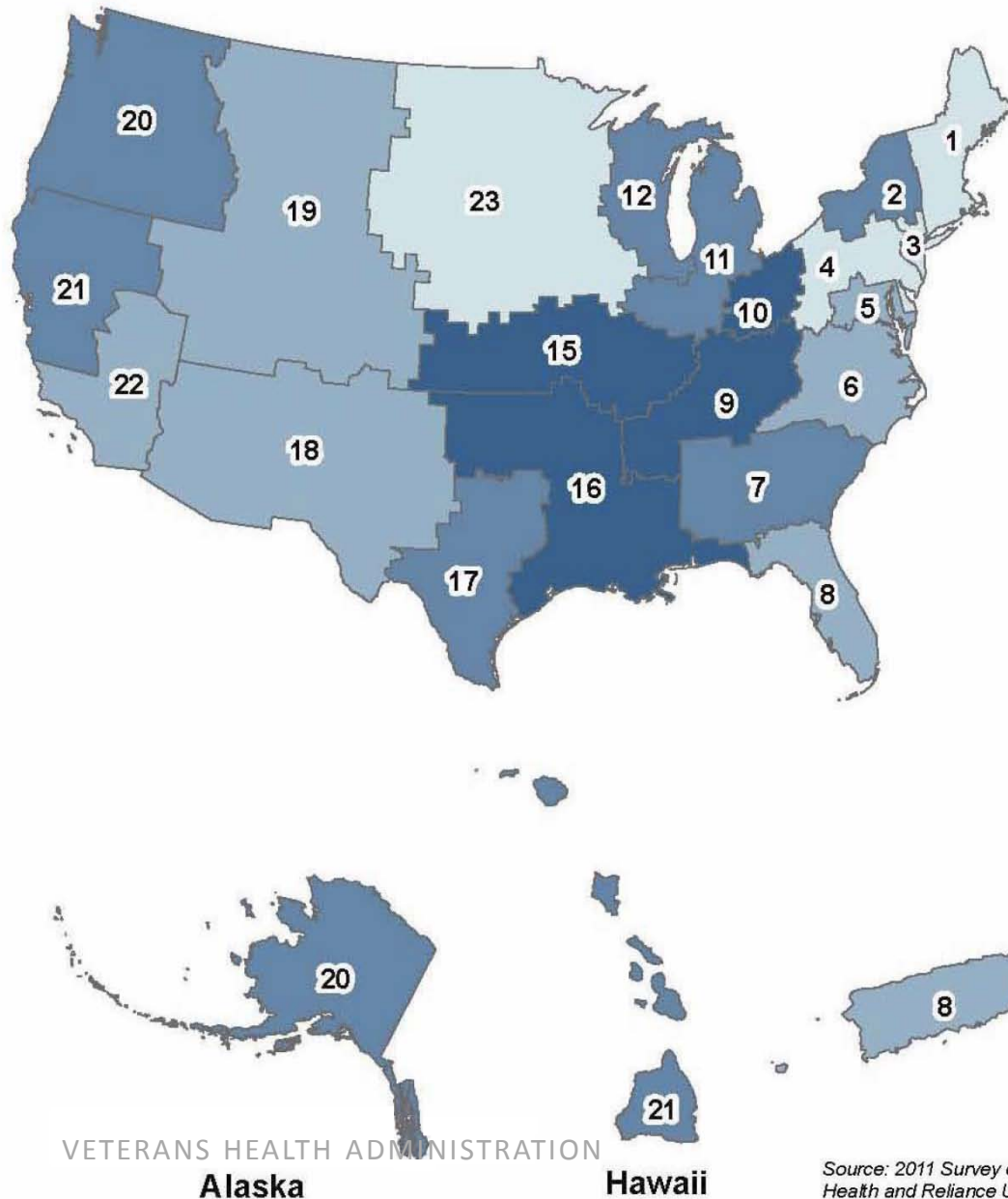
Tobacco Use: The Problem

- Tobacco use is the #1 cause of preventable death and disease in the U.S.
- Tobacco use causes **443,000 deaths** each year in the U.S.
- **50%** of people who smoke die prematurely
- Nicotine is the most addictive substance on the planet
- Tobacco use is a chronic, relapsing condition

Comparative Causes Of Annual Deaths in the United States

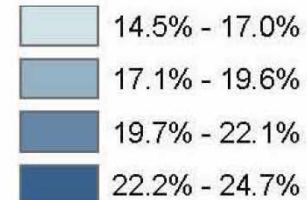


2011 Percent of Enrollees Who Are Current Smokers



2011 Current Smokers in VA

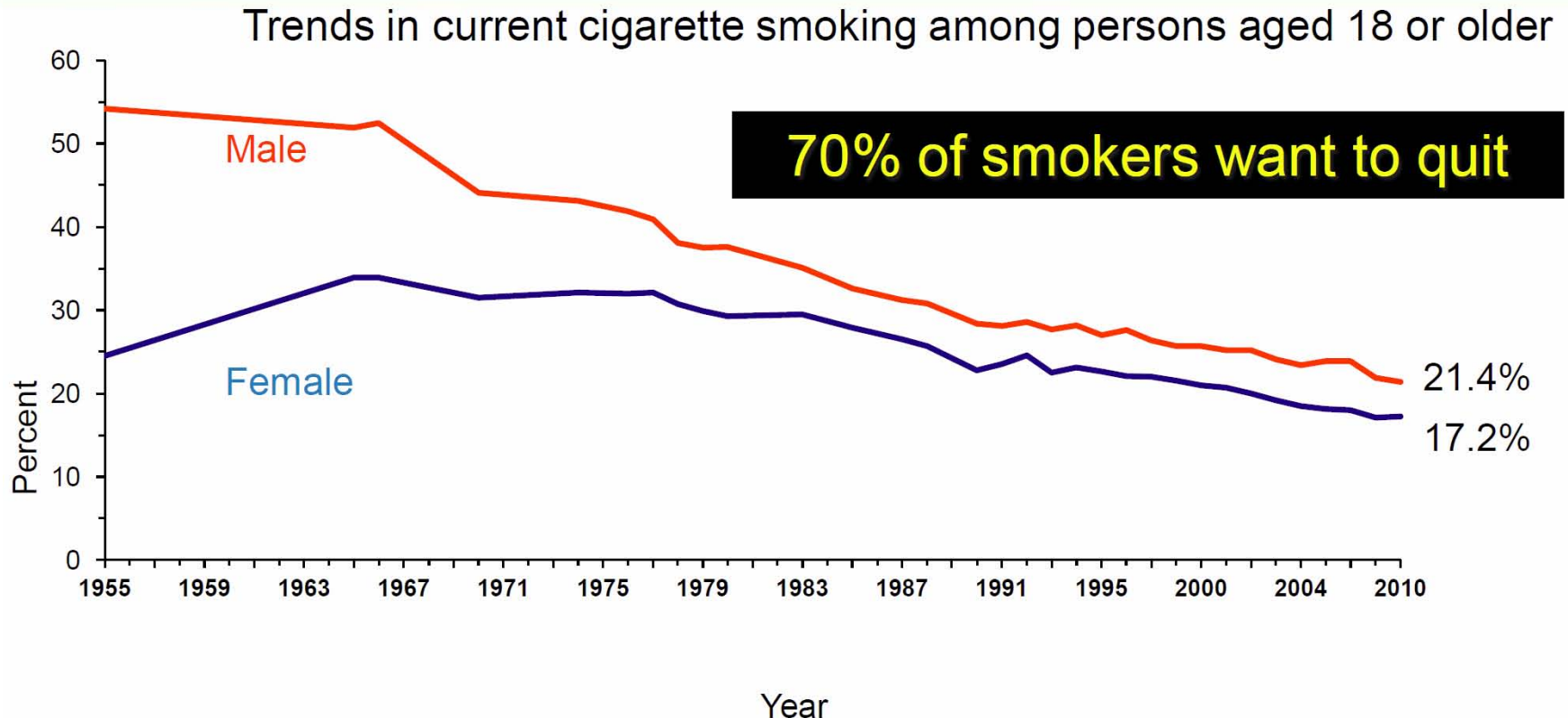
Legend



VISN	Current Smokers	VISN Enrollees	Percent Smokers
1	56,138	332,099	16.9%
2	41,534	196,993	21.1%
3	44,851	309,324	14.5%
4	73,852	434,417	17.0%
5	38,348	201,544	19.0%
6	83,910	450,582	18.6%
7	99,967	503,816	19.8%
8	117,795	674,243	17.5%
9	89,412	362,231	24.7%
10	68,687	291,429	23.6%
11	77,822	359,197	21.7%
12	64,654	320,726	20.2%
15	75,905	320,121	23.7%
16	140,988	626,920	22.5%
17	84,092	387,732	21.7%
18	65,063	333,009	19.5%
19	43,675	254,027	17.2%
20	73,555	365,494	20.1%
21	68,690	339,602	20.2%
22	82,446	433,072	19.0%
23	67,517	398,531	16.9%
Nat'l	1,558,900	7,895,108	19.7%

Source: 2011 Survey of Veteran Enrollees' Health and Reliance Upon VA

Trends in Adult Smoking, By Sex U.S. 1955–2010



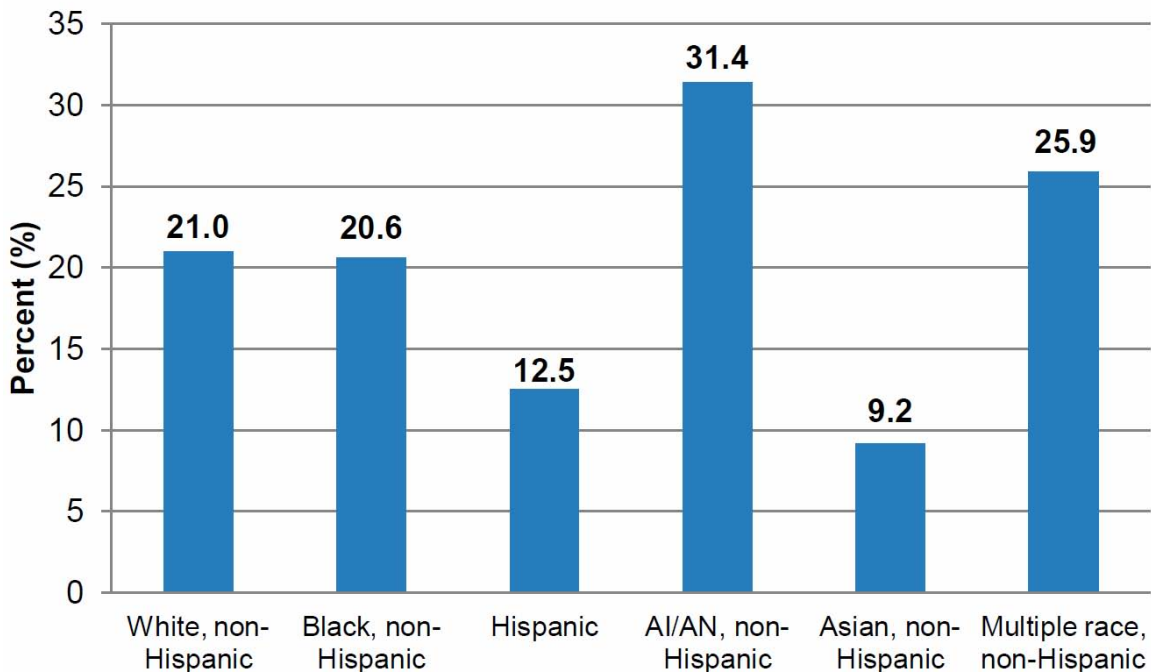
Graph provided by the Centers for Disease Control and Prevention. 1955 Current Population Survey; 1965–2010 NHIS. Estimates since 1992 include some-day smoking.

Smoking as a Health Disparity Issue

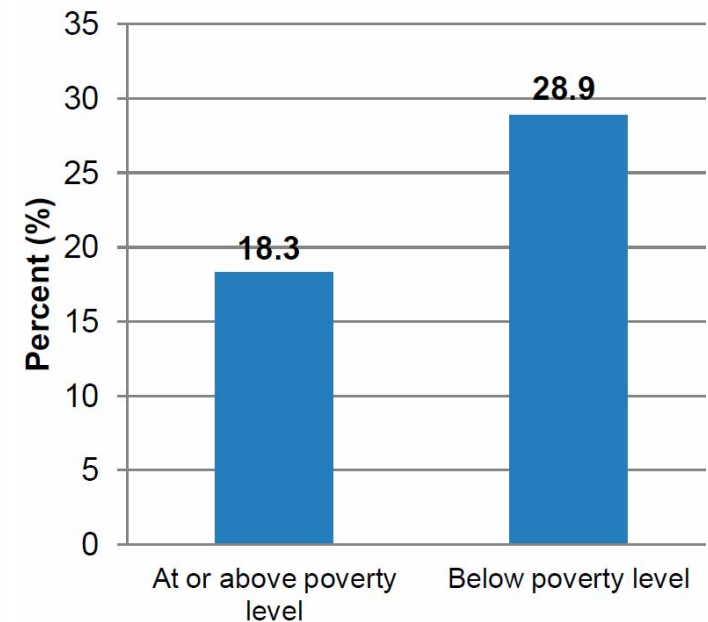
- Smoking is a health disparity issue, with higher rates of smoking among those with lower income and educational levels, as well as populations such as American Indians, Alaskan native populations, and populations with co-morbid psychiatric or substance use disorders. These are the same populations that are less likely to have access to evidence-based treatment or have smoke-free workplaces.
 - Almost 1 out of every 2 cigarettes sold is sold to an adult with psychiatric illness.
- A 2009 study of an urban public hospital population found ‘extraordinarily high’ rates of smoking and high levels of secondhand smoke exposures, as assessed through cotinine levels upon admission. Levels were similar to national levels in the 1950s. (Benowitz et al., 2009)

Smoking Rates Vary by Race and Socioeconomic Status

Current Cigarette Smokers by Race



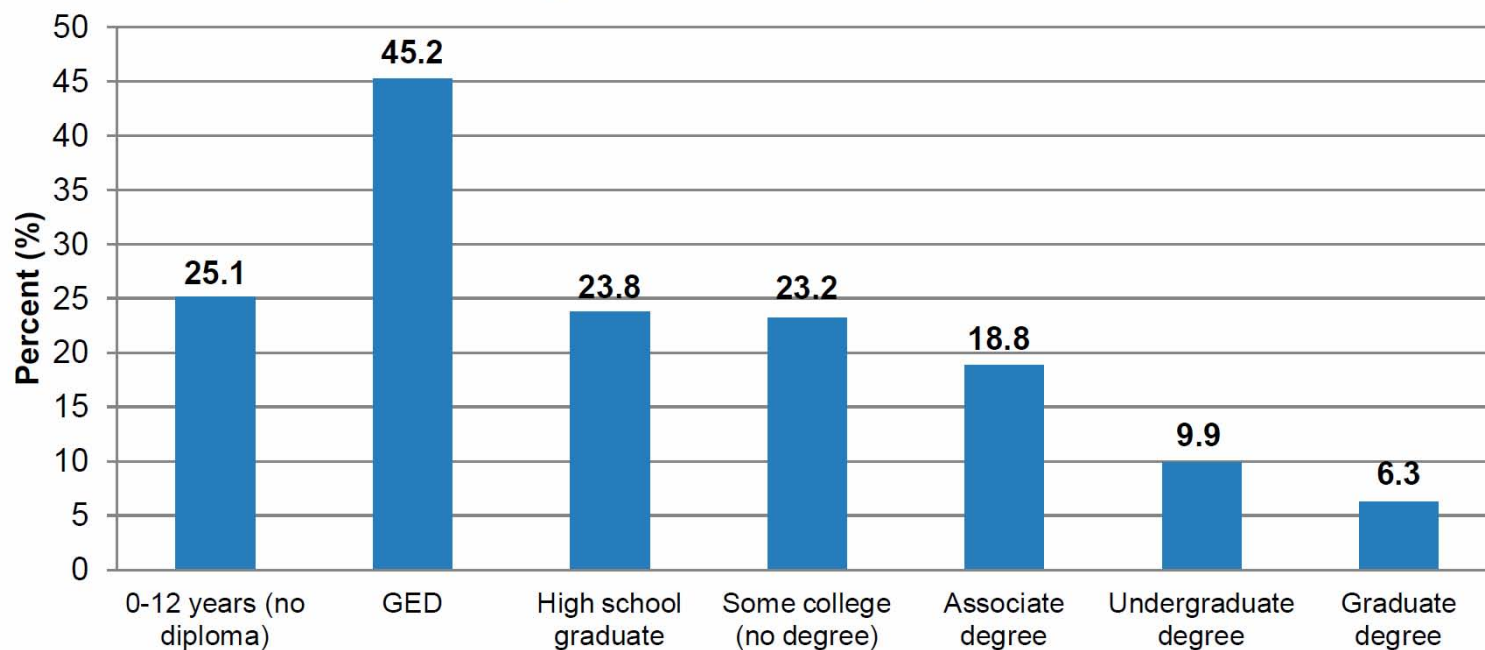
Current Cigarette Smokers by Poverty Status



Education Level Influences Smoking Rates

- Rates of current cigarette smoking decrease with increasing education

Current Cigarette Smokers by Education



Decreasing Rates of Tobacco Use: The Solution

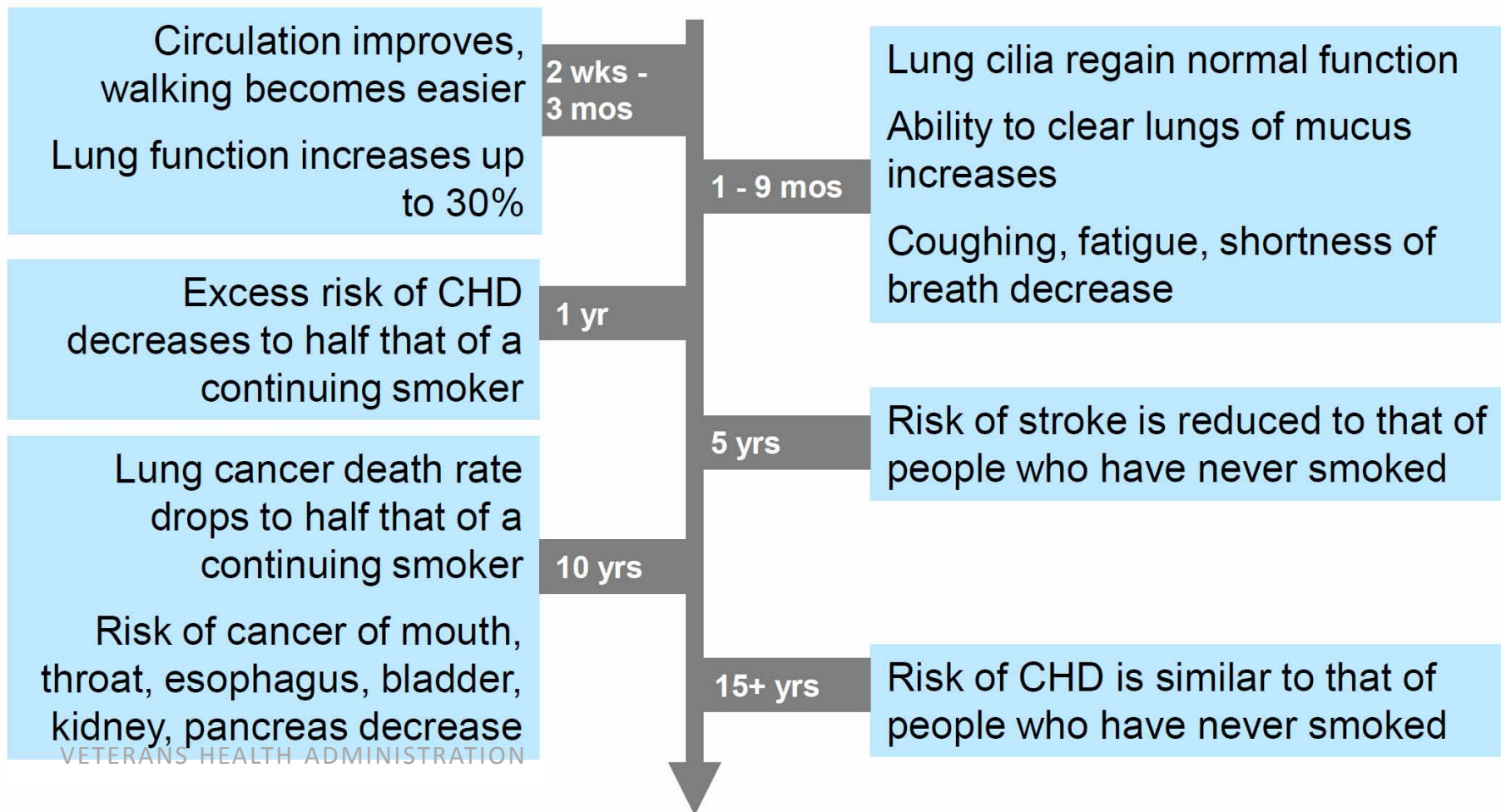
- Effective treatments exist that can significantly increase rates of long-term abstinence and are supported by the *2008 United States Public Health Services Update of Clinical Practice Guidelines on the Clinical Treatment of Tobacco Use and Dependence* (USPHS CPG).
- Policies that reduce smoking prevalence:
 - Increasing tobacco taxes
 - Smoke-free workplace, restaurant, and bar laws
- Changes in cultural norms around smoking and tobacco use

De-normalization of Tobacco Use

- Many states have banned smoking in workplaces, bars, and restaurants
- Some cities and states are also contemplating laws regulating smoking in public housing and apartment buildings, as well as outdoor spaces
- With fewer places to smoke, smokers have become increasingly marginalized
- As rates of tobacco use have declined, those who use tobacco are disproportionately less educated and of a lower socioeconomic status
- Image of a smoker has changed from “handsome, successful” to “asocial, irresponsible, and self-destructive”
- This de-normalization has helped with tobacco control efforts and to induce smokers to quit, however some worry that this tactic has resulted in the stigmatization of smokers

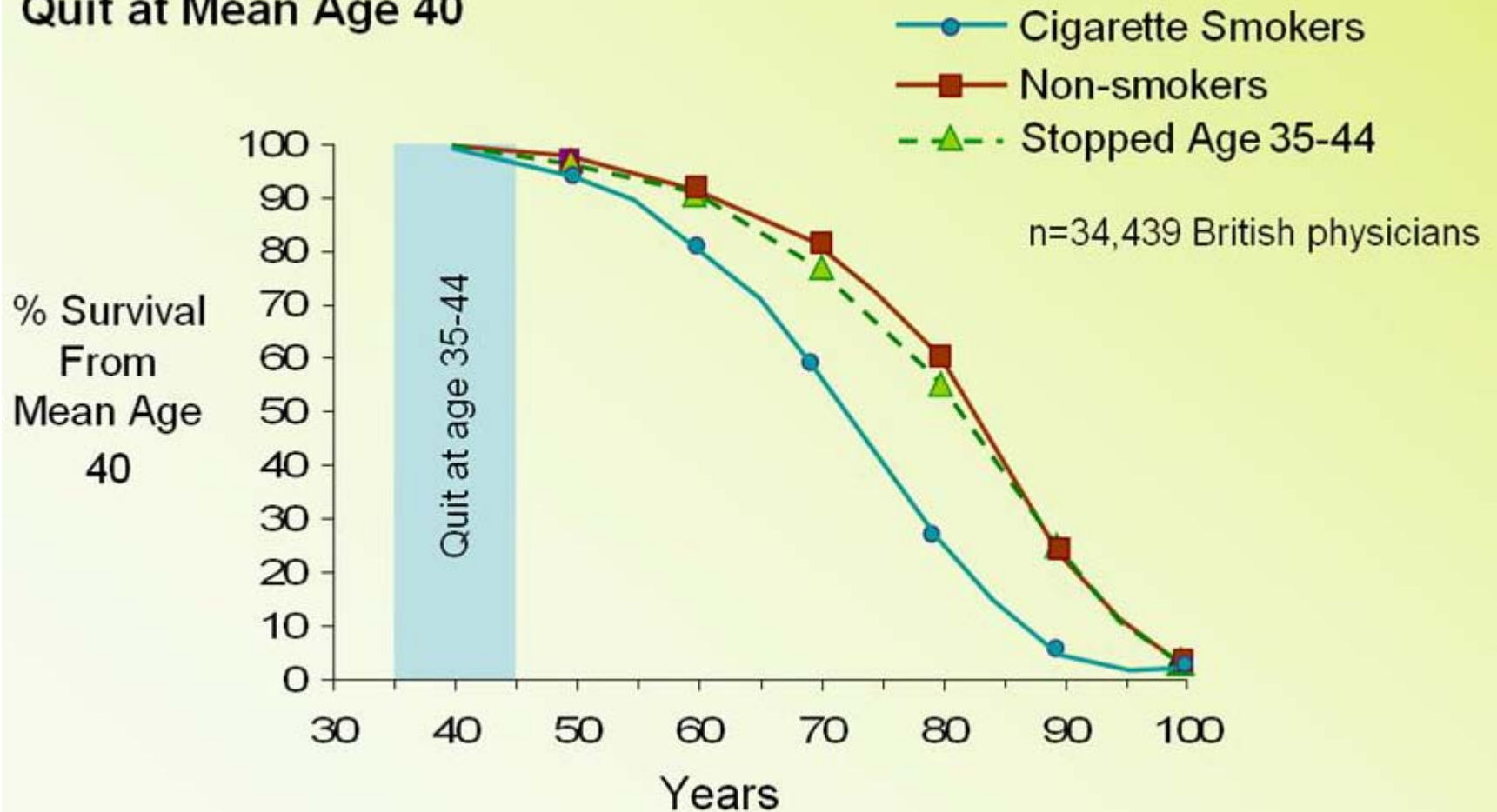
Quitting: Health Benefits

Time Since Quit Date



Quitting Increases Life Expectancy

Quit at Mean Age 40



Tobacco Dependence is a Chronic Disease

Tobacco Dependence

Physiological



Behavioral

The addiction to nicotine



Medications for cessation

The habit of using tobacco



Behavior change program

Treatment should address the physiological **and** the behavioral aspects of dependence

Quit Attempts & Treatment Utilization

- 70% of smokers report wanting to quit
- About half of all people who smoke try to quit each year
- Only 3-5% of quit attempts are successful

- Although effective treatments exist, about two thirds of quit attempts do not use any evidence-based treatment
- Less than 1/3 of people who quit use medication
- Less than 10% of people who quit use behavioral counseling
- Less than 6% of people use both medication and behavioral counseling during their quit attempt

Shiffman et al., *Am J Prev Med*, 2008
Shiffman, *Am J Prev Med*, 2010

Evidence-Based Smoking Cessation Treatments Exist: **2008 Clinical Practice Guidelines**

- **2008 Update: Treating Tobacco Use and Dependence**, U.S. Department of Health and Human Services – Public Health Service (PHS)
- In 2009, the 2008 Update of the PHS Guidelines was adopted as the **VA/DoD Clinical Practice Guideline for the Management of Tobacco Use**.

Treating Tobacco Use And Dependence

U.S. Department of
Health and Human Services
Public Health Service

CPG 2008: Main Findings on Treating Tobacco Use

- Every smoker should be screened for tobacco use and willingness to quit at each session
- All smokers should be offered pharmacotherapy to assist in quitting
- Brief advice given by MD and non-MD clinicians effective in increasing quit rates
- Dose Response Relationship between counseling intensity and effectiveness
 - While more intensive counseling is more efficacious, ***even brief counseling (2 minutes) can double quit rate***

Behavioral Counseling: Intensity/Session

Length CPG Table 6.8: Effectiveness of and estimated abstinence rates for various intensity levels of session length (n=43 studies)

Level of Contact	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
No Contact	30	1.0	10.9
Minimal Counseling (< 3 minutes)	19	1.3 (1.01—1.6)	13.4 (10.9—16.1)
Low-Intensity Counseling (3-10 minutes)	16	1.6 (1.2—2.0)	16.0 (12.8—19.2)
Higher Intensity Counseling (> 10 minutes)	55	2.3 (2.0—2.7)	22.1 (19.4—24.7)

Recommendation: Minimal interventions lasting less than 3 minutes increase overall tobacco abstinence rates. Every tobacco user should be offered at least a minimal intervention, whether or not s/he is referred to an intensive intervention.

Strength of Evidence = A

Recommendation: There is a strong dose-response relation between session length of person-to-person contact and successful treatment outcomes. Intensive interventions are more effective than less intensive interventions and should be used whenever possible.

Strength of Evidence = A.

Behavioral Counseling: Number of Sessions

CPG Table 6.10: Effectiveness of and estimated abstinence rates for various intensity levels of session length (n=46 studies)

Number of Sessions	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
0-1 Session	43	1.0	12.4
2-3 Sessions	17	1.4 (1.1—1.7)	16.3 (13.7—19.0)
4-8 Sessions	23	1.9 (1.6—2.2)	20.9 (18.1—23.6)
>8 Sessions	51	2.3 (2.1—3.0)	24.7 (21.0—28.4)

Recommendation: Person-to-person treatment delivered for four or more sessions appears especially effective in increasing abstinence rates. Therefore clinicians should strive to meet four or more times with individuals quitting tobacco use. **Strength of Evidence = A.**

Behavioral Counseling Formats

CPG Table 6.13 : Effectiveness of and estimated abstinence rates for various types of formats (n=58 studies)

Counseling Format	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
No Format	20	1.0	10.8
Self-help	93	1.2 (1.02—1.3)	12.3 (10.9—13.6)
Proactive telephone counseling	26	1.2 (1.1—1.4)	13.1 (11.4—14.8)
Group counseling	52	1.3 (1.1—1.6)	13.9 (11.6—16.1)
Individual counseling	67	1.7 (1.4—2.0)	16.8 (14.7—19.1)

Recommendation: Proactive telephone counseling, group counseling, and individual counseling formats are effective and should be used in smoking cessation interventions.

Strength of Evidence = A

Effectiveness of intervention by type of

clinician CPG Table 6.11: Effectiveness of and estimated abstinence rates for interventions delivered by different types of clinicians (n=29 studies)

Type of Clinician	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
No clinician	16	1.0	10.2
Self-help	47	1.1 (0.9—1.3)	10.9 (9.1—12.7)
Nonphysician clinician	39	1.7 (1.3—2.1)	15.8 (12.8—18.8)
Physician clinician	11	2.2 (1.5—3.2)	19.9 (13.7—26.2)

Recommendation: Treatment delivered by a variety of clinician types increases abstinence rates. Therefore, all clinicians should provide smoking cessation interventions.

Strength of Evidence = A

CPG 2008: The "5 A" model

Helping smokers through the process of quitting

ASK *Do you currently use tobacco?*

ADVISE Use clear, strong, personalized messages:

I think it is important that you quit smoking. I can help.

Quitting smoking is one of the most important things you can do to protect your health.

Smoking interferes with your psych medications. Stopping smoking can improve your mood.

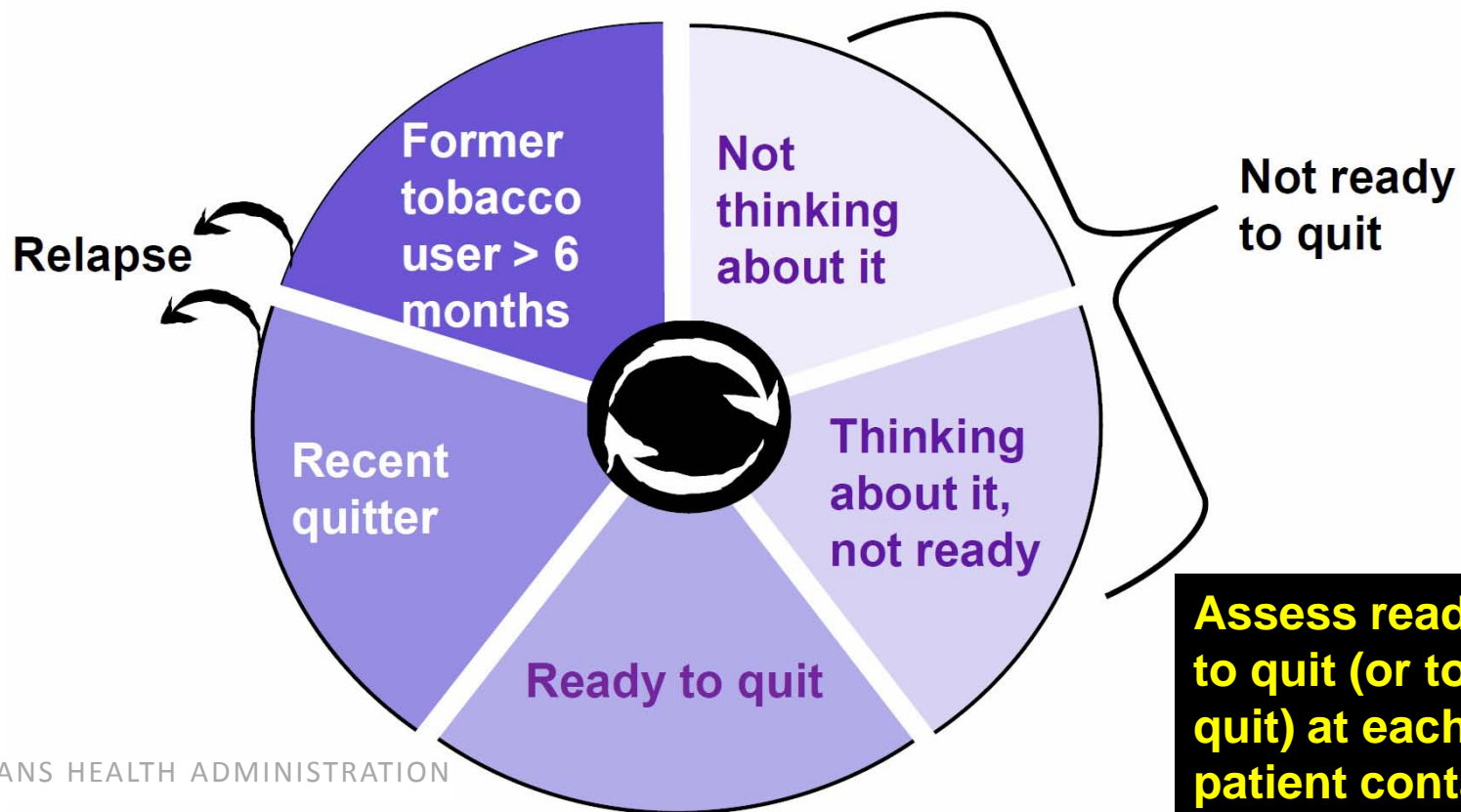
ASSESS *Are you willing to give quitting a try in the next 30 days?*

ASSIST Help patients with quitting – provide counseling, increase motivation to quit

ARRANGE Set up follow-up sessions and/or attendance at smoking cessation clinic

Stages of Quitting

For most patients, quitting is a cyclical process, and their readiness to quit (or stay quit) will change over time.



When a Patient is Ready to Quit:

- **ASSESS** and **ASSIST** (5A's)
- Assess: tobacco use history
- Discuss: key issues /barriers
- Facilitate: quitting process
 - Practical counseling
 - Problem solving
 - Coping skills training
 - Social support delivered as part of treatment

When a Patient is Ready to Quit: ASSESS Tobacco Use History

- Praise the patient's readiness
- Assess tobacco use history
 - Current use: type(s) of tobacco, amount
 - Past use: duration, recent changes
 - Past quit attempts:
 - Number, date, length
 - Methods used, compliance, duration
 - Reasons for relapse

When a Patient is Ready to Quit: DISCUSS Key Issues and Barriers

- Reasons/motivation to quit *What would be good about quitting?*
Common reasons include:
 - Health concerns
 - Social concerns
 - Financial concerns
- Confidence in ability to quit *How confident are you about quitting?*
 - Many patients may lack confidence due to prior failed attempts
 - To increase patient confidence, psychologists can:
 - Provide additional support
 - Work with patient to design a treatment plan
 - Emphasize that this time will be different because the patient will be more prepared

When a Patient is Ready to Quit: DISCUSS Key Issues and Barriers

- Identify triggers BEFORE quitting
- Triggers for tobacco use
 - *What situations lead to temptations to use tobacco?*
 - *What led to relapse in the past?*
- Examples of routines/situations associated with tobacco use:

When drinking coffee	After meals or after sex
While driving in the car	During breaks at work
When bored or stressed	While on the telephone
While watching television	While with specific friends or family members who use tobacco
While at a bar with friends	

When a Patient is Ready to Quit: Key Issues and Barriers for Women

- Different stressors and barriers to quitting compared to men
 - Greater likelihood of depression
 - Weight control concerns
 - Estrogen may contribute to higher metabolism of nicotine compared to men, making nicotine replacement therapies less effective
 - Different motives for smoking (e.g., socialization)
 - More educated women may be more likely to smoke than less educated women
 - Single women are more likely to smoke than married women

When a Patient is Ready to Quit: DISCUSS Key Issues and Barriers

Concerns about withdrawal symptoms

- Chest tightness
- Stomach pain, constipation, gas
- Cough, dry throat
- Cravings
- Depressed mood
- Fatigue
- Hunger
- Insomnia
- Irritability

Most symptoms manifest within the first 1–2 days, peak within the first week, and subside within 2–4 weeks.

- Most do not last more than 2-4 weeks after quitting
- Cravings can last longer, up to several months or years
 - Often can be ameliorated with cognitive or behavioral coping strategies

When a Patient is Ready to Quit: FACILITATE the Quitting Process

- Discuss methods for quitting
 - Discuss pros and cons of available methods
 - Pharmacotherapy: *A treatment, not a crutch!*
 - Importance of behavioral counseling
- Set a quit date
- Discuss coping strategies
 - Cognitive coping strategies
 - Focus on retraining the way a patient thinks
 - Behavioral coping strategies
 - Involve specific actions to reduce risk for relapse

When a Patient is Ready to Quit: FACILITATE the Quitting Process

Cognitive Coping Strategies

Retrain the way a patient thinks. Many panic because they are thinking about tobacco after they quit, which can lead to relapse. Cognitive coping strategies help patients learn to recognize that thinking about a cigarette does not mean they need to have one.

1. Review commitment to quit
 - *I want to be a nonsmoker, and the temptation will pass.*
2. Distractive thinking
3. Positive self-talk
 - Remind of previous difficult situations where he/she successfully avoided tobacco use
4. Relaxation through imagery
5. Mental rehearsal and visualization

When a Patient is Ready to Quit: FACILITATE the Quitting Process

Behavioral Coping Strategies

Specific actions for dealing with the effects of quitting and reducing the risk for relapse. Some techniques may work better for some than others. The patient's reasons for and times they use tobacco may help to determine which strategies to use.

1. Control your environment
 - Tobacco-free home and workplace
 - Remove cues to tobacco use; actively avoid trigger situations
 - Modify behaviors that you associate with tobacco: when, what, where, how, with whom
2. Substitutes for smoking
 - Water, sugar-free chewing gum or hard candies (oral substitutes)
3. Take a walk, diaphragmatic breathing, self-massage
4. Actively work to reduce stress, obtain social support, and alleviate withdrawal symptoms

When a Patient is Ready to Quit: **FACILITATE** the Quitting Process

DEADS Strategy

DELAY Urge will fade after 5-10 minutes.

ESCAPE Remove yourself from the situation or trigger which led to the urge.

AVOID Avoiding situations and triggers that are associated with smoking.

DISTRACT Get busy with an activity to keep your mind off the urge.

SUBSTITUTE Use healthy snacks or objects such as straw or toothpick during an urge.

When a Patient is Ready to Quit: FACILITATE the Quitting Process

- Provide medication counseling
 - Promote consistent use as prescribed
 - Discuss proper use, with demonstration
- Discuss concept of “slip” versus relapse
 - **Slip** Smoking 1 or a few cigarettes
 - **Relapse** Going back to regular, daily smoking
 - *Let a slip slide.*
- Offer to assist throughout quit attempt
 - Follow-up contact #1: first week after quitting
 - Follow-up contact #2: in the first month
 - Additional follow-up contacts as needed and preferably 6 months or more (Remember Tobacco Use Disorder is a CHRONIC Disease)
- Congratulate the patient!

2008: Treatment Recommendations – Counseling: For Smokers Not Willing to Make a Quit Attempt at This Time

Recommendation: Motivational intervention techniques appear to be effective in increasing a patient's likelihood of making a future quit attempt. Therefore, clinicians should use motivational techniques to encourage smokers who are not currently willing to quit to consider making a quit attempt in the future. **Strength of Evidence = B**

Some evidence suggests that extensive training is needed before competence is achieved in the MI technique (CPG 2008: p.105)

Motivational Interventions

I see you are smoking 2 packs a day. As your provider, I'm concerned about the impact on your health. Is it okay if we talk about that for a few minutes?

Have you thought about quitting smoking?

When you think of the pros and cons of smoking, how do they stack up for you these days?

If you look at this list of things you could work on to improve your heart health/HTN..., which one(s) seem like things you might be ready to talk about?

Motivational Interviewing: Importance and Confidence Rulers

On a scale of 0 to 10, with 0 meaning not important and 10 meaning very important, how important do you think it is for you to quit smoking?

On a scale of 0 to 10, with 0 meaning not at all confident and 10 meaning completely confident, how confident do you feel about quitting?

*Why are you at a ___ instead of a (lower number here) ___? **and/or** What would need to happen to make your _____ increase to (slightly higher number) ___?*

Combining Medications & Counseling

CPG Table 6.24: Effectiveness of and estimated abstinence rates for combination of counseling and medication vs. counseling alone (n=9 studies)

Intervention	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
Counseling alone	11	1.0	14.6
Medication + counseling	13	1.7 (1.3, 2.1)	22.1 (18.1, 26.8)

Providing medications in addition to counseling significantly increases treatment outcomes.

Combining Medications & Counseling

CPG Table 6.22: Effectiveness of and estimated abstinence rates for combination of counseling & medication vs. medication alone (n=18 studies)

Intervention	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (95% C.I.)
Medication alone	8	1.0	21.6
Medication + counseling	39	1.3 (1.1, 1.6)	27.0 (22.7, 31.4)

Recommendation: The combination of counseling and medication is more efficacious than either medication or counseling alone. Therefore, when feasible and not contraindicated, both counseling and medication should be provided to patients trying to quit smoking. **Strength of Evidence=A**

Medications for Smoking Cessation

Monotherapy

- Nicotine replacement therapy (NRT)
 - Nicotine patch
 - Nicotine gum
 - Nicotine lozenge
 - Nicotine inhaler
 - Nicotine nasal spray
- Bupropion
- Varenicline (2nd line agent)
- Nortriptyline (not FDA-approved for tobacco cessation)
- Clonidine (not FDA-approved for tobacco cessation)

VA first line options on the National Formulary

Combination Therapy

- Nicotine patch + other NRT
- Bupropion + NRT

CPG 2008 Recommendation:

Certain combinations of first-line medications have been shown to be effective smoking cessation treatments. Therefore, clinicians should consider using these combinations of medications with their patients who are willing to quit.

How to Assess Nicotine Dependence

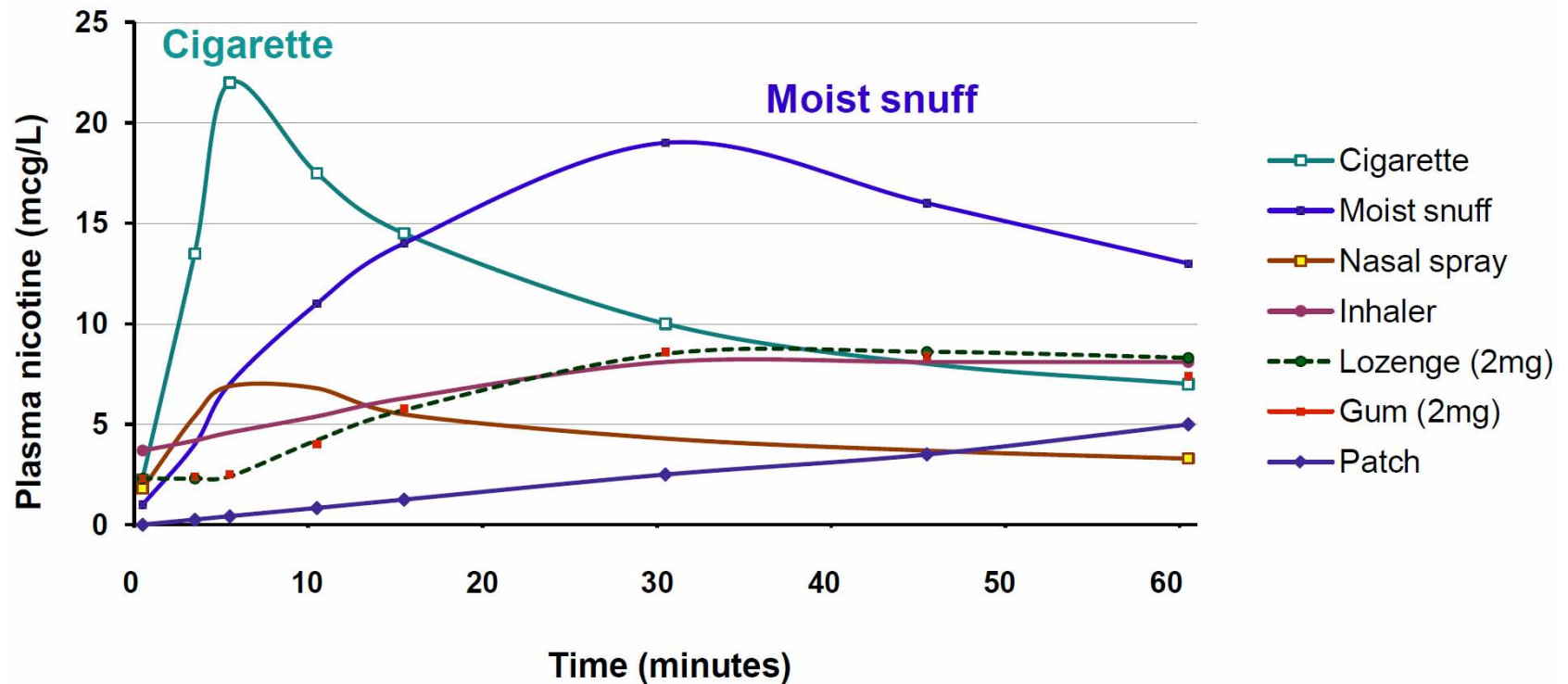
- Time to first cigarette upon waking better correlated with dependence
- Brief Fagerström Test for Nicotine Dependence
 1. How soon after waking do you smoke your first cigarette?
 - a. Less than five minutes (3 points)
 - b. 5 to 30 minutes (2 points)
 - c. 31 to 60 minutes (1 point)
 2. How many cigarettes do you smoke each day?
 - a. More than 30 cigarettes (3 points)
 - b. 21 to 30 cigarettes (2 points)
 - c. 11 to 20 cigarettes (1 point)

Scoring: 5-6=heavy dependence; 3-4=moderate; 0-2=light.

Nicotine Replacement Therapy

- Reduces withdrawal symptoms and cravings by providing nicotine in place of smoking
- Includes:
 - Nicotine patch
 - Nicotine gum
 - Nicotine lozenge
 - Nicotine inhaler and nicotine nasal spray (*not on VA formulary)
- Best if **used in combination**
- During counseling, can check to see if patients are using NRT correctly

Plasma Nicotine Concentrations for Nicotine-Containing Products



Nicotine Patch

- Provides a continuous source of nicotine through the skin
- Replaced every 16 – 24 hours
- Site on skin is rotated to prevent skin irritation
- More effective if used in combination with nicotine gum or lozenge ad lib for strong cravings
- If trouble sleeping – recommend patients remove before sleeping

For more information on nicotine patch dosing see:

www.publichealth.va.gov/docs/smoking/cessationguidelinepart3_508.pdf

Nicotine Gum

- “Bite and Park” method
 1. Patient bites down on gum a few times until tastes nicotine (peppery) or feels tingling sensation
 2. Gum is parked between the cheek and gum until taste/sensation goes away
 3. Bite and repeat until gum has lost its taste (~30 min)
- Remind patients not to use like chewing gum
- Can be used ad lib to control strong tobacco cravings
- Do not eat or drink for 15 min before or after using gum. Acidic beverages (soda, coffee) can reduce nicotine absorption
- If patient has nausea – check to see if they are using the gum correctly

For more information on nicotine gum dosing see:

www.publichealth.va.gov/docs/smoking/cessation/guidelinepart3_508.pdf

Nicotine Lozenge

- Place lozenge in mouth and park between the cheek and gum
- Occasionally move from one side of the mouth to the other
- Do not eat the lozenge, avoid swallowing
- Do not use like a hard candy
- If patient has nausea – check to see if they are using the lozenge correctly
- Can be used ad lib to control strong tobacco cravings
- Nicotine absorbed through the lining of the mouth
- Do not eat or drink for 15 min before or after using the lozenge. Acidic beverages (soda, coffee) can reduce nicotine absorption

For more information on nicotine lozenge dosing see:

www.publichealth.va.gov/docs/smoking/cessationguidelinepart3_508.pdf

Bupropion

- Atypical antidepressant that reduces cravings and symptoms of withdrawal
- Can be used in combination with NRT
- Use with extreme caution in patients that:
 - Are currently taking medication for depression or another mental health disorder
 - Have a history of seizures
 - Have an eating disorder

Black Box Warning: Risk of serious neuropsychiatric events including behavior change, hostility, agitation, depression, and suicidality as well as worsening of pre-existing psychiatric illness in patients taking bupropion and after discontinuation.

Varenicline

- Partial nicotinic receptor agonist
- Reduces tobacco cravings and symptoms of withdrawal and also makes tobacco use less enjoyable
- Should not be used in combination with NRT or bupropion
- Varenicline is a 2nd line agent in VA. It can be used only in patients that:
 - Have already tried to quit smoking with NRT or bupropion
 - Have been screened for hopelessness and suicidal ideation and judged to be stable by their primary care or mental health provider
 - Receive close follow-up from their health care provider
- Commonly causes nausea and sleep disturbances
- Rarely causes patients to have violent thoughts, intent, or actions towards themselves or others

Black Box Warning: Risk of serious neuropsychiatric events including behavior change, hostility, agitation, depression, and suicidality as well as worsening of pre-existing psychiatric illness in patients taking varenicline and after discontinuation.

Effectiveness of Monotherapies

CPG Table 6.26: Effectiveness and abstinence rates for monotherapies vs placebo at 6 months postquit (n=83 studies)

Medication	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (%)
Placebo	80	1.0	13.8
Varenicline 2mg/d	5	3.1 (2.5,3.8)*	33.2
Nic. Nasal Spray	4	2.3 (1.7,3.0)*	26.7
High dose nic patch >25mgs	4	2.3 (1.7,3.0)*	26.5
Long term nic gum >14 weeks	6	2.2 (1.5,3.2)*	26.1
Varenicline 1mg/d	3	2.1 (1.5,3.0)*	25.4
Nicotine inhaler	6	2.1 (1.5,2.9)*	24.8
Bupropion SR	26	2.0 (1.8,2.2)*	24.2
Nicotine patch	32	1.9 (1.7,2.2)*	23.4
Long term nic patch >14 weeks	10	1.9 (1.7,2.3)*	23.7
Nicotine gum	15	1.5 (1.2,1.7)*	19.0

Effectiveness of Combination Therapies

CPG Table 6.26: Effectiveness and abstinence rates for smoking medication combinations vs. placebo at 6 months postquit (n=83 studies)

Medications	Number of Arms	Estimated Odds Ratio (95% C.I.)	Estimated Abstinence Rate (%)
Placebo	80	1.0	13.8
Patch (>14wks) +ad lib NRT	3	3.6 (2.5,5.2)*	36.5
Patch + Bupropion	3	2.5 (1.9,3.4)*	28.9
Patch+Nortriptyline	2	2.3 (1.3,4.2)*	27.3
Patch + Inhaler	2	2.2 (1.3,3.6)*	25.8
2 nd gen. antidep + patch	3	2.0 (1.2,3.4)*	24.3

- Certain combinations of first-line medications have been shown to be effective
 - **Strength of evidence: A**
- Effective combinations are long term nic patch + ad lib NRT, nic patch + inhaler, nic patch + bupropion
 - Long term patch + ad lib NRT associated with highest quit rates vs. placebo
- Patch + nortrip/2nd gen. antidepressants not FDA approved, not recommended
- Clinicians should consider factors of cost, tolerability, compliance

Clinical Case Discussion #1

CT is a 55y/o male who smokes between 1.5-2 packs per day, lately towards the high end due to inactivity in the winter. During the summer he keeps busy outside with gardening and fishing. He and his wife are planning to quit smoking together on New Year's Day, but are not sure about the best way. Recently his best friend was diagnosed with lung cancer. They both started smoking together when they were 15. CT wants to avoid going through anything like that.

Discussion:

- What questions would you ask CT?
- How would you recommend CT try to quit smoking?
- What strategies would you use?

Clinical Case Discussion #2

TG is a 60y/o man who smokes 1 ppd. He has been smoking for most of his life. He's come in today for counseling related to his COPD.

"I've thought about quitting smoking, but I don't think it would do much good, my lungs are so bad and I have already had a heart attack. You medical people seem to think you know what is best for people, but what do you know about me. I have a lot of stress and this is how I deal with it." -TG

Discussion:

- What questions would you ask TG?
- How would you talk to TG about quitting?

Clinical Case Discussion #3

GS is a 45 year old man who is being discharged from the hospital after having 4-vessel CABG. He smoked 2 packs per day prior to hospitalization. He has not smoked since the surgery and has worn a nicotine patch during hospitalization. As he prepares to go home, he admits he is concerned about having cravings at home because his wife smokes.

He wants to quit and is afraid of having more heart problems. He's not sure if his wife will smoke outside, since she's done so much for him lately. He usually spends evenings together with his wife watching TV together and smoking to relax.

Discussion:

- GS has already quit – how would you help him?

National VA Tobacco Cessation Resources

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- Providers can contact the VHA Clinical Public Health Program for any questions at: publichealth@va.gov
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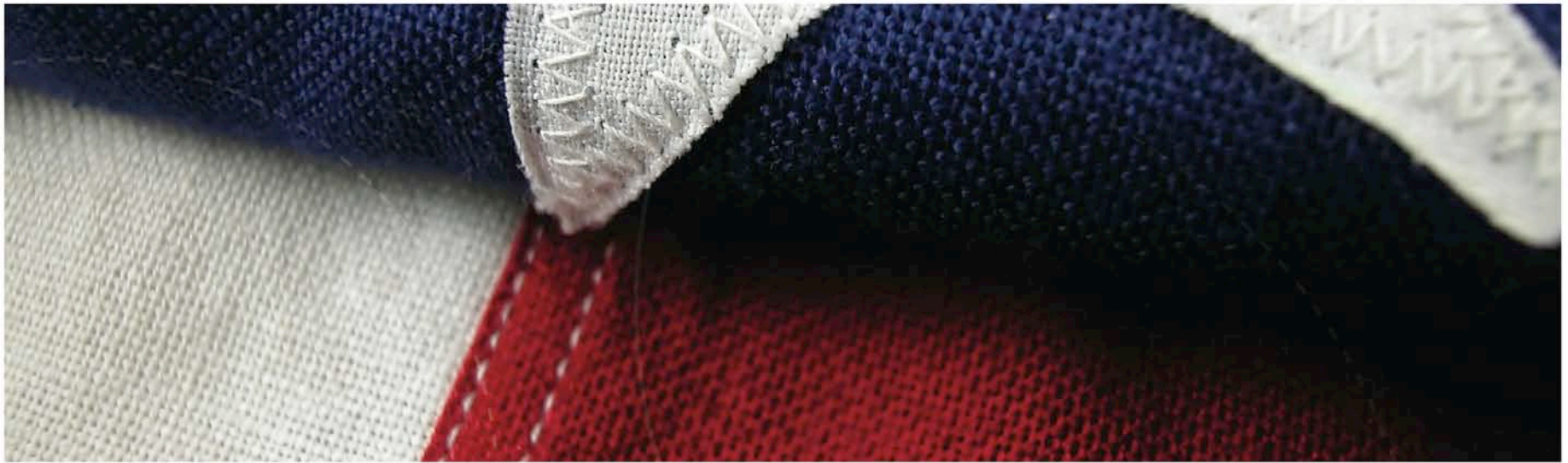
Useful Links for VA Information

- VA Varenicline Prescribing Criteria:
www.pbm.va.gov/Clinical%20Guidance/Criteria%20For%20Use/Varenicline%20Criteria%20for%20Prescribing.doc
- Recommendations for Use of Combination Therapy in Tobacco Use Cessation:
vaww.publichealth.va.gov/docs/smoking/combo_NRT_recomm.pdf
- VA Tobacco Use Cessation Treatment Guidance; Medication options:
www.publichealth.va.gov/docs/smoking/cessationguidelinepart2_508.pdf

Additional Tobacco Cessation Resource

- Collaboration with VA Clinical Public Health and DoD TRICARE
- Web-based resource: www.ucanquit2.org
 - Self-management tools and resources
 - Live chat services with a coach
 - Community support forum and blog
- VHA posters and Veteran wallet cards distributed to facilities and stocked in VA Forms Depot
 - Available online at:
vaww.publichealth.va.gov/smoking/clinical.asp





SMOKING CESSATION AND MENTAL HEALTH POPULATIONS

A Resource for VHA Psychology Trainees – Part II

AUGUST 2012

CPH

Clinical Public Health



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<http://rxforchange.ucsf.edu>

Portions of this program were adapted, with permission, from the Rx for Change: Clinician-Assisted Tobacco Cessation program

Clinical Public Health Tobacco Use Cessation Program Curriculum Committee:

Jeannie Beckham, Ph.D. Timothy Carmody, Ph.D.,

Timothy Chen, Ph.D., Dana Christofferson, Ph.D.,

Judith Cooney, Ph.D., Margaret Dundon, Ph.D.,

Steven Fu, MD, MSCE, Kim Hamlett-Berry, Ph.D., Miles McFall, Ph.D.

CPH

Clinical Public Health



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OVERVIEW—Second Hour

- Tobacco Use in Mental Health and Substance Use Disorder Populations
- Treatment Research for Co-Occurring Disorders
- VA Tobacco Cessation Resources
 - National
 - Local

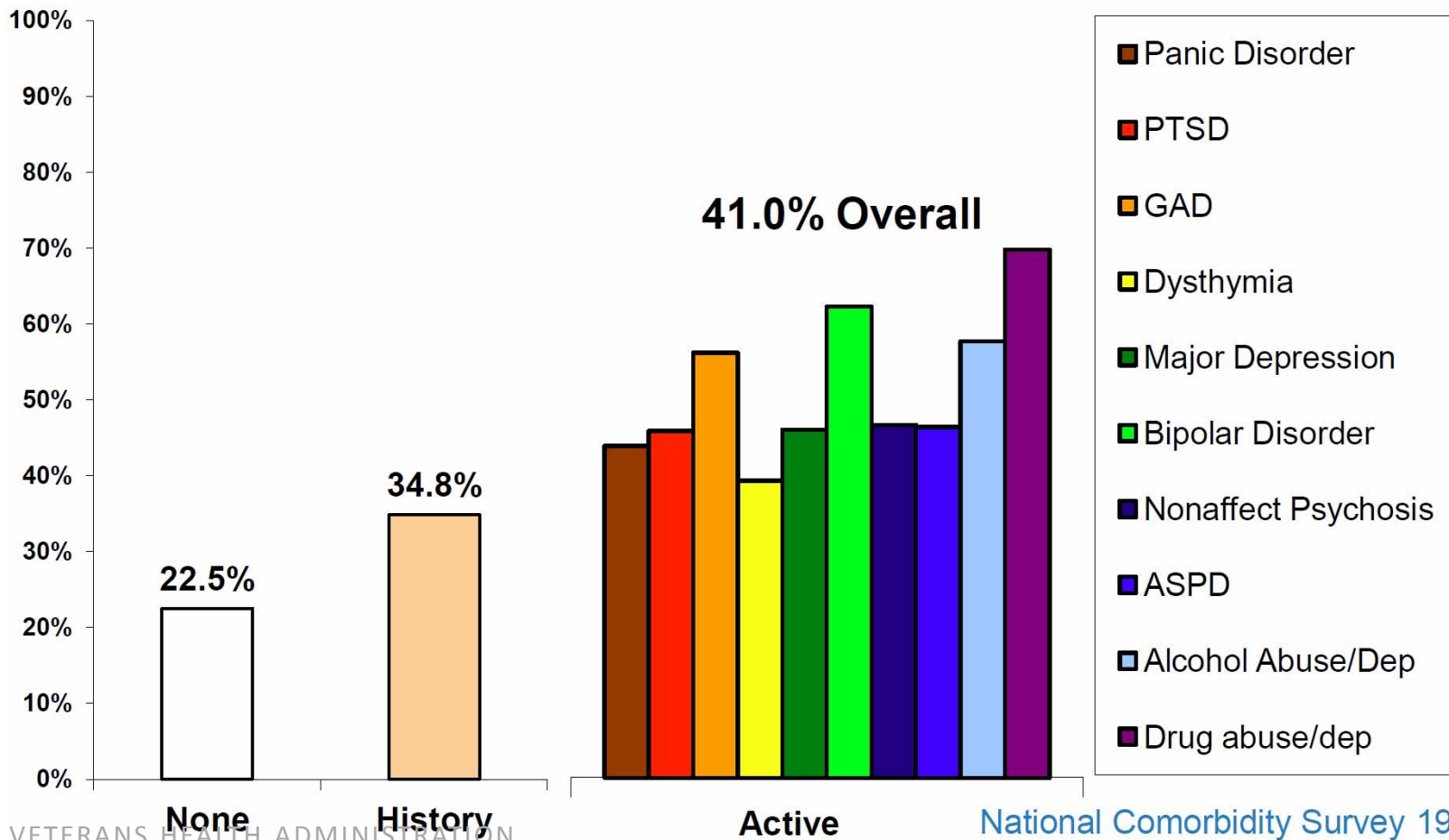
Tobacco Use in Mental Health Populations: The Problem

- Nicotine dependence – most prevalent substance use disorder among psychiatric patients
 - Smoking rates are 2 to 4 x's that of the general population (Hughes, 1993; Poirier, 2002)
- Persons with mental illness comprise 44% to 46% of the US tobacco market (Lasser et al., 2000; Grant et al., 2004)
 - 175 billion cigarettes and \$39 billion in annual sales (USDA, 2004)
- 40.6% of smokers had a mental illness in the past month (Lasser et al., 2000)
- Among medical specialists, psychiatrists are the least likely to address tobacco use with their patients (Association of American Medical Colleges, 2007)

Tobacco Kills People with Mental Illness

- Tobacco users with mental illness die 25 years earlier than non-users (Colton & Manderscheid, 2006)
- Tobacco users with mental illness have a greater risk of dying from CVD, respiratory illnesses, and cancer, than people without mental illness (e.g., Dalton et al., 2002; Himelhoch et al., 2004; Lichtermann et al., 2001)
- Tobacco use predicts future suicidal behavior
 - Independent of depressive symptoms, prior suicidal acts, and other substance use (Breslau et al., 2005; Oquendo et al., 2004)

Smoking Rate by Psychiatric History



Smoking Rate by Psychiatric History in VA

- Smoking rates among VA patients with mental illness
- Current overall smoking rate in VA **19.7%**
- Odds ratio of being a current smoker compared to not having a mental disorder:

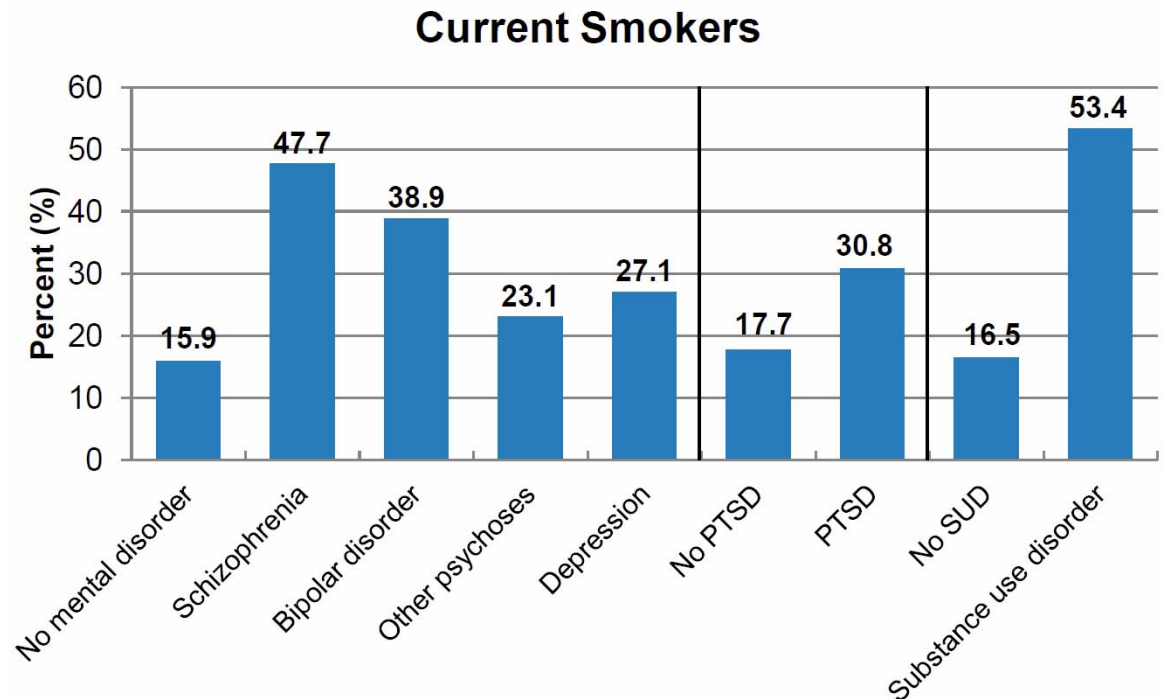
Schizophrenia **1.78**

Bipolar disorder **1.46**

Depression **1.18**

PTSD **0.95**

Substance use **2.74**



Tobacco Use Complicates Psychiatric Treatment

- Tobacco smoke can induce cytochrome P450 enzymes (CYP1A2)
 - Nicotine itself does not have this effect
- Inducing cytochrome P450 can affect other drugs by altering:
 - Absorption
 - Distribution
 - Metabolism
 - Elimination
- This may alter the effectiveness of certain medications
- Metabolism of some antidepressants and antipsychotic medications can be increased by tobacco smoke, lowering blood levels and possibly reducing the therapeutic benefit

Pharmacokinetic Drug Interactions with Smoking

Some drugs may have a decreased effect due to tobacco smoke induction of CYP1A2:

- Caffeine
- Clozapine (Clozaril™)
- Fluvoxamine (Luvox™)
- Haloperidol (Haldol™)
- Olanzapine (Zyprexa™)
- Phenothiazines (Thorazine, Trilafon, Prolixin, etc.)
- Propranolol
- Tertiary TCAs / cyclobenzaprine (Flexaril™)
- Thiothixene (Navane™)
- Other medications: estradiol, mexiletene, naproxen, phenacetin, riluzole, ropinirole, tacrine, theophylline, verapamil, r-warfarin (less active), zolmitriptan

Smoking cessation will reverse these effects.

Decreasing Rates of Tobacco Use in Mental Health Populations: The Solution

- Effective treatments exist that can significantly increase rates of long-term abstinence and are supported by the *2008 United States Public Health Services Update of Clinical Practice Guidelines on the Clinical Treatment of Tobacco Use and Dependence* (USPHS CPG).
- Policies that reduce smoking prevalence:
 - Increasing tobacco taxes
 - Smoke-free workplace, restaurant, and bar laws
- Changes in cultural norms around smoking and tobacco use

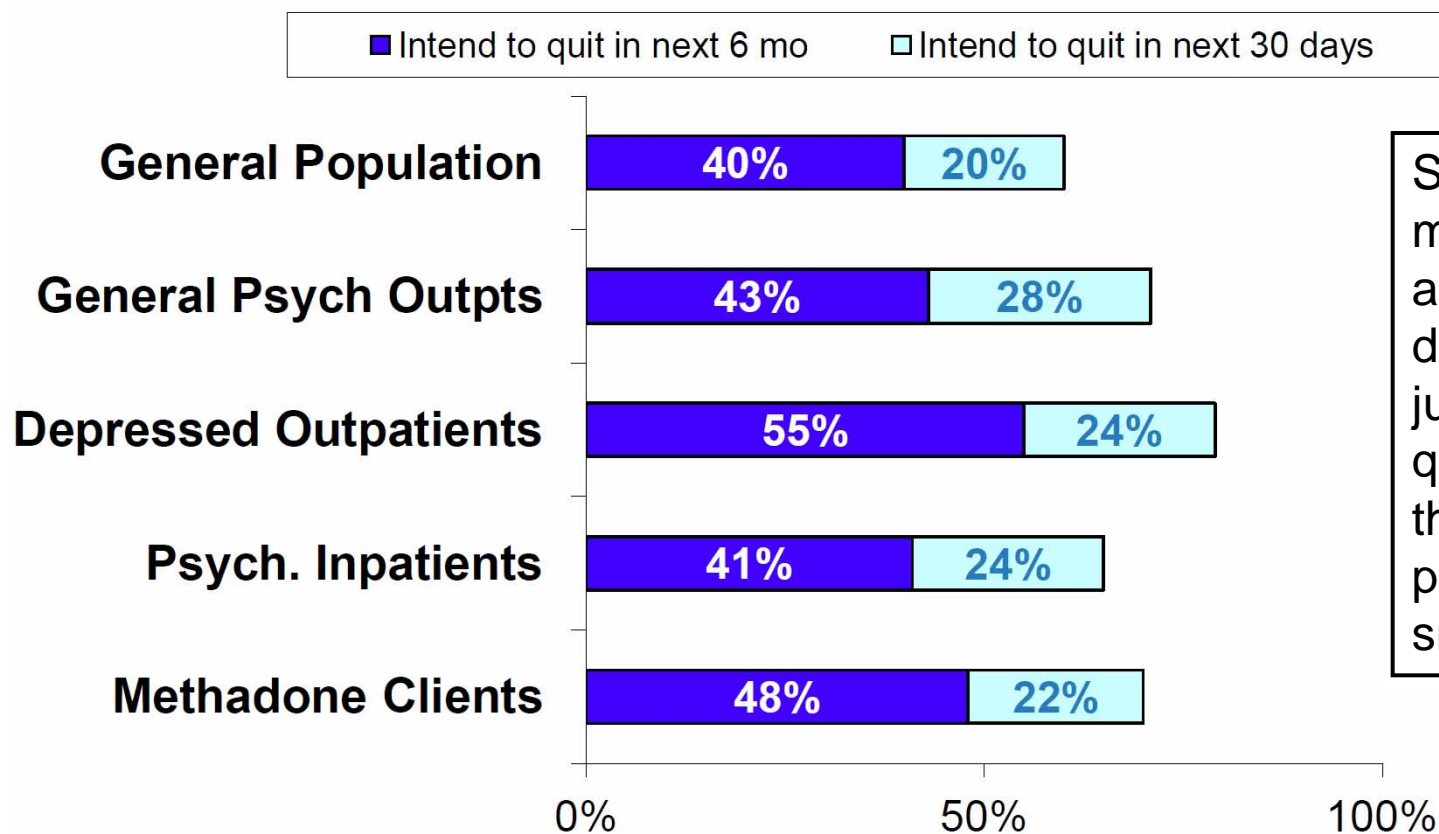
CPG 2008: Main Findings on Treating Tobacco Use

- Every smoker should be screened for tobacco use and willingness to quit at each session
- All smokers should be offered pharmacotherapy to assist in quitting
- Brief advice given by MD and non-MD clinicians effective in increasing quit rates
- Dose response relationship between counseling intensity and effectiveness
 - While more intensive counseling is more efficacious, ***even brief counseling (2 minutes) can double quit rate***

De-normalization of Tobacco Use

- Many states have banned smoking in workplaces, bars, and restaurants
- Some cities and states are also contemplating laws regulating smoking in public housing and apartment buildings, as well as outdoor spaces
- With fewer places to smoke, smokers have become increasingly marginalized
- As rates of tobacco use have declined, those who use tobacco are disproportionately less educated and of a lower socioeconomic status
- Image of a smoker has changed from “handsome, successful” to “asocial, irresponsible, and self-destructive”
- This de-normalization has helped with tobacco control efforts and to induce smokers to quit, however some worry that this tactic has resulted in the stigmatization of smokers
- The stigma attached to smoking may further marginalize individuals who are already stigmatized due to their mental illness

Readiness to Quit in Patients with Psychiatric Disorders



Smokers with mental illness or addictive disorders are just as ready to quit smoking as the general population of smokers.

*** No relationship between psychiatric symptom severity and readiness to quit**

Integration of Smoking Cessation into MH and SUD Care

- 2000 PHS CPG – Smokers with MH disorders should be provided with the same level of smoking cessation treatment as the general population (Fiore et al., 2000)
- 2008 update of CPG – Included an emphasis to practitioners to treat smokers with MH and SUD disorders (Fiore et al., 2008)
- Why do so few MH treatment programs provide smoking cessation treatment to their patients? Potential barriers include perceptions that quitting smoking will adversely affect patients' psychiatric functioning or interfere with abstinence from drugs or alcohol, and lack of training of mental health professionals in evidence-based smoking cessation care (Hall and Prochaska, 2009)

Why Mental Health Providers?

“ Those who deliver mental health care often pride themselves on treating the whole patient....yet many fail to treat nicotine dependence. They forget that when their patient dies of a smoking-related disease, their patient has died of a psychiatric illness they failed to treat.”

Dr. John Hughes

Why Mental Health Providers?

- Frequent contact with the patient and existing therapeutic relationship
 - Appropriate to address smoking as a chronic disorder
- Have the skills to deliver tobacco cessation counseling
 - Expertise in behavioral and counseling treatment
- Many trained in substance abuse treatment
- Able to identify and address any changes in psychiatric symptoms during the quit attempt
- **Improved outcomes** compared to referring patients to smoking cessation clinic care (McFall et al., 2010)
- CPG 2008:
...such treatments could be conveniently delivered within the context of chemical dependence or mental health clinics.

Quit Rates in Patients with Psychiatric Disorders

Lifetime diagnosis	U.S. Population (%)	Current Smoker (%)	Lifetime Smoker (%)	Smoking Quit Rates (%)
No psychiatric diagnosis	50.7	22.5	39.1	42.5
PTSD	6.4	45.3	63.3	28.4
Major depression	16.9	36.6	59.0	38.1
Dysthymia	6.8	37.8	60.0	37.0
Bipolar disorder	1.6	68.8	82.5	16.6

Schroeder & Morris, *Annu Rev Public Health*, 2010

Myths About Tobacco Use and Mental Illness

1. Tobacco is necessary self-medication for the mentally ill
 - Nicotine does enhance concentration and attention, however this effect is short-lived and repeated exposure reduces the effect
2. People with mental illness are not interested in quitting smoking
 - About 70% of smokers with mental illness are interested in quitting
 - Readiness to quit is unrelated to psychiatric diagnosis, severity of symptoms, or the coexistence of substance use
3. Mentally ill people cannot quit smoking
 - Studies have documented success in quitting in patients with depression, schizophrenia, PTSD, and substance use disorder
4. Quitting smoking interferes with recovery from mental illness
 - Quitting smoking does not exacerbate depression or PTSD symptoms, lead to psychiatric hospitalization, or increase use of alcohol or illicit drugs
5. Smoking is the lowest priority concern for patients with acute psychiatric symptoms
 - People with psychiatric disorders are more likely to die from tobacco-related disease than from mental illness

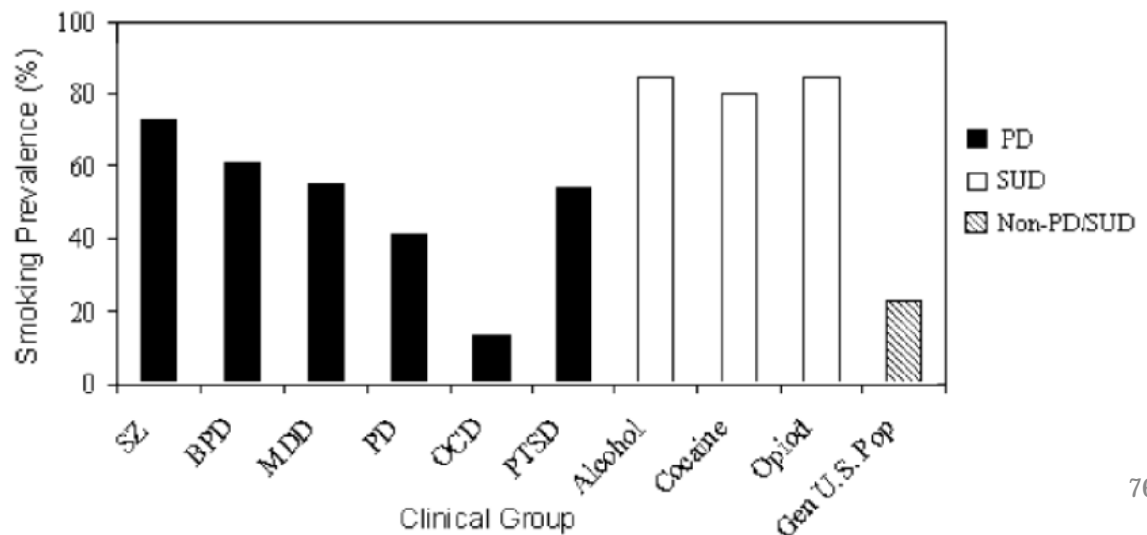
Smoking and Substance Use Disorder

- Patients with substance use disorders (SUD) are 3-4 X as likely to use tobacco as individuals without SUD
- Tobacco-related diseases account for 50% of deaths among individuals treated for alcohol dependence (Hurt et al., 1996)
- Death rate 4-xs greater for cigarette smoking vs. nonsmoking long-term drug abusers (Hser et al., 2004)
- Health consequences of tobacco and other drug use synergistic: 50% greater than sum of each individually (Bien & Burge, 1990; Castellsague et al., 1999; Pelucchi et al., 2006)

Smoking and Substance Use Disorder

- **Over 75%** of alcohol- and drug-dependent individuals in early recovery smoke
- **About 80%** of cocaine users also smoke cigarettes
- **More than 80%** of opioid-dependent individuals smoke
- A survey of individuals in methadone maintenance treatment found 77% smoked and 80% were “somewhat” or “very” interested in quitting (Richter et al., 2001)

Kalman et al., 2005



Evidence that Smoking Cessation Improves Substance Use Outcomes

- Smoking cessation predicts improved alcohol sobriety
- 12-month prospective study: patients who quit smoking less likely to be alcohol dependent and had a higher number of total days of abstinence from alcohol and illicit drugs than those that continued to smoke (Kohn et al., 2003)
- Meta-analysis: Smoking cessation interventions associated with **25% increased likelihood** of long-term abstinence from alcohol and illicit drugs (Prochaska et al., 2004)

Summary: Tobacco Treatment for Substance Abusing Patients

In general:

- Smoking cessation does not adversely affect patients with substance use disorders
- Currently available interventions show some effectiveness, at least for the short-term
- Range of abstinence rates, with unknown determinants
- Disorder specific data may eventually allow better tailoring of treatments
 - Example: Varenicline significantly reduces alcohol consumption in people who smoke (Mitchell et al., 2012)

Research on Tobacco & Depression

Most of the research has been conducted with people with a **history** of major depressive disorder (MDD), in free-standing smoking clinics

- Greater tobacco abstinence with increased psychological support (Hall et al., 1994; Brown et al., 2001)
- Individuals with **recurrent MDD** may be especially helped by CBT—mood management approaches
- Individuals with a history of MDD may have more difficulty quitting and more severe withdrawal symptoms than those without MDD

Treating Tobacco Dependence in Depressed Smokers

322 depressed smokers recruited from four outpatient psychiatry clinics

Stepped Care Intervention

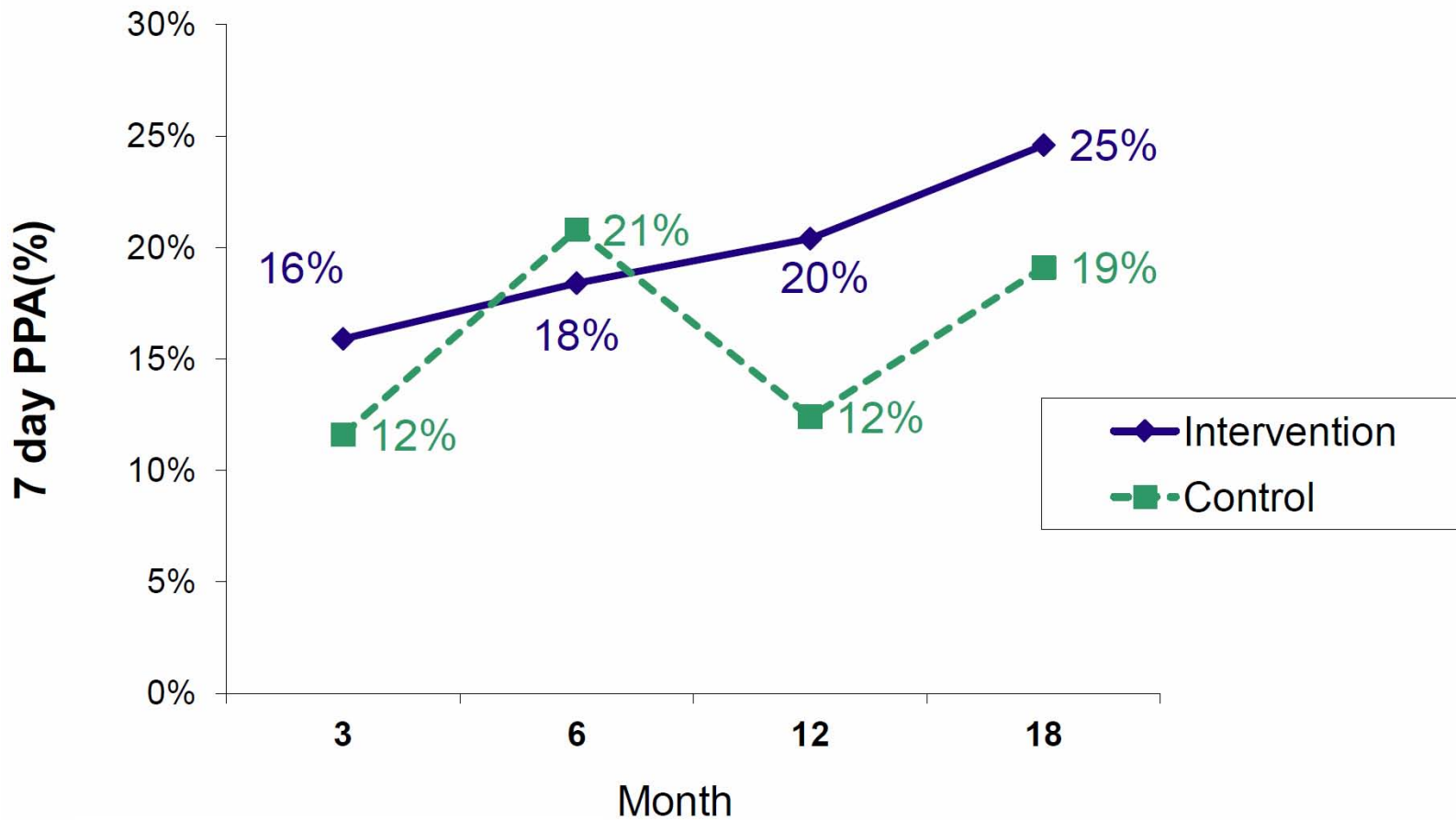
Stage-based expert system counseling

Nicotine patch

6 session individual counseling

Brief Contact Control

Abstinence Rates by Treatment Condition



Depression Severity & Tobacco Treatment Outcome

- **NO RELATIONSHIP**
 - Depression severity, as measured by the Beck Depression Inventory-II, was unrelated to participants' likelihood of quitting smoking
 - Among intervention participants, depression severity was unrelated to their likelihood of accepting cessation counseling and nicotine patch

Does Abstinence from Tobacco Cause Recurrence of Psychiatric Disorders?

- Case studies suggesting major depressive episode (MDE) recurrence after quitting smoking among those with a history of depression
- Glassman, 2001: MDE recurrence in 6% (n=2) of those smoking vs. 31% (n=13) of those abstinent
 - Differential loss to follow-up: 5% (n= 2/44) of quitters missing vs. 39% (n= 22/56) of continued smokers
- Tsoh, 2001: N=308, no difference in rate of MDE among abstinent vs. smoking participants
 - Difference in rate of MDE by depression history: 10% among those with no MDD history vs. 24% if MDD+ history

Depression is a remitting and relapsing disorder

Mental Health Outcomes: Depressed Smokers Treated for Tobacco

- Depressed patients who quit smoking:
 - No increase in suicidality
 - Quit: 0% vs Smoking: 1-4%
 - No increase in psych hospitalization
 - Quit: 0-1% vs. Smoking: 2-3%
 - Comparable improvement in % of days with emotional problems
 - No difference in use of marijuana, stimulants or opiates
 - Less alcohol use among those who quit smoking

Prochaska et al., 2008, Am J Public Health

Tobacco Treatment for Patients with Schizophrenia

- A study comparing smoking quit rates in psychiatric patients with and without psychosis found (Selby et al., 2010):
 - No significant difference in either quit rate or reduction in smoking between patients with schizophrenia to psychiatric patients without psychosis.
 - Patients with schizophrenia had more treatment sessions and a longer length of treatment than patients without psychosis.
 - A higher number of individual treatment sessions was a significant predictor of having quit at the end of treatment for patients with schizophrenia.
- Tobacco abstinence (1-wk) **not** associated with worsening of:
 - Attention, verbal learning/memory, working memory, or executive function/inhibition, or clinical symptoms of schizophrenia (Evins et al., 2005)

Smoking and Schizophrenia – Impact on Functioning

- Patients with schizophrenia who smoke, when compared to those who do not smoke, are likely to have higher rates of hospitalization, higher medication doses, and more severe psychiatric symptoms (Prochaska, 2011, NEJM)
- Study of outpatients with schizophrenia estimated the monthly costs of cigarettes to be approximately 27% of their monthly income (Steinberg, Williams, & Ziedonis, 2004)

Summary: Tobacco Cessation & Schizophrenia

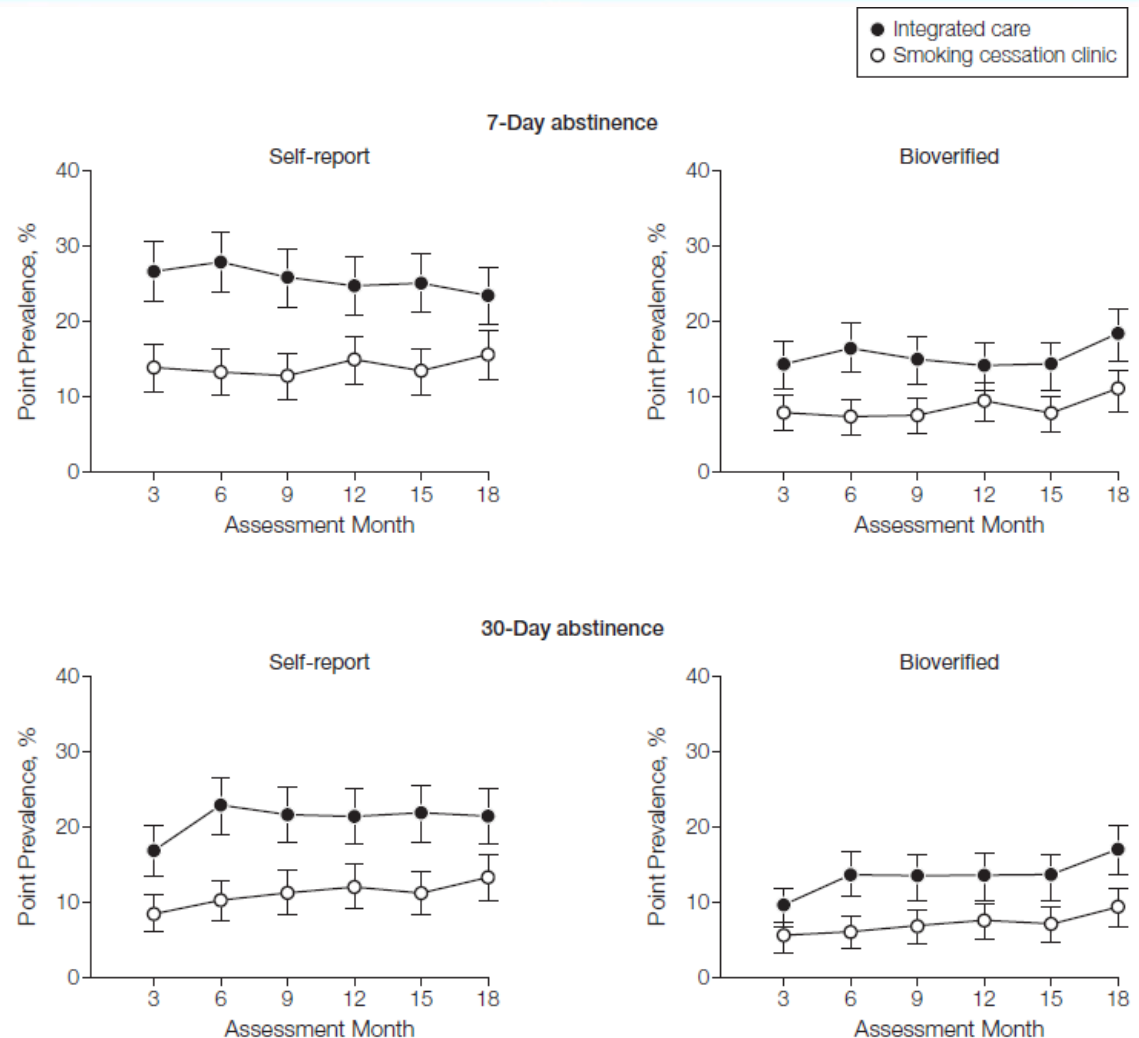
- Patients with schizophrenia generally smoke more cigarettes per day and are more nicotine dependent than patients without a psychiatric illness (Wing et al., 2012)
- Treatments tailored for smokers with schizophrenia have the same efficacy as standard programs (George et al., 2000)
- Atypical antipsychotics associated with greater cessation than typical antipsychotics
- Bupropion: decreased the negative symptoms of schizophrenia (Evins et al. 2005, George et al. 2002)
- Varenicline: no worsening of clinical symptoms and a trend toward improved cognitive function (Evins et al., 2009)
- More intensive and extended durations of treatment may be required

Integrating Tobacco Treatment into PTSD Treatment

- RCT with 943 smokers with PTSD at VA Medical Centers
- Integrated care (IC)
 - Manualized treatment delivered by PTSD clinician and case manager (3-hr training)
 - Behavioral counseling once a week for 5 weeks plus 3 follow-up sessions
 - NRT, bupropion, varenicline
- Usual care (UC): referral to VA smoking cessation clinic

Integrating Tobacco Cessation into PTSD Treatment

- More successful than referring patients to smoking cessation clinic
- Integrated care doubled prolonged abstinence compared to referral to smoking cessation clinic



McFall et al. *JAMA*, 2010

VETERANS HEALTH ADMINISTRATION

Smoking & Bipolar Disorder

- Very little research has been done on patients with bipolar disorder who smoke. An online survey of ever smokers with bipolar disorder found:
 - 48% of current smokers reported smoking to treat their MI
 - Less than one-third reported that their MH provider encouraged them to quit smoking, some reported discouragement
 - 74% of current smokers want to quit
 - Intention to quit was not related to current mental health symptoms
 - Ex-smokers reported better mental health than current smokers
- Possible concerns for bipolar patients:
 - Renal clearance of varenicline in patients with compromised kidney function due to chronic lithium use
 - Potential for bupropion to precipitate a manic episode
 - Clinical trials of these medications are needed in patients with bipolar disorder who smoke

More Studies Needed

- Few studies on tobacco cessation in individuals with mental illness
 - Most clinical trials exclude participants with mental illness
- CPG 2008 recommends future research on:
 - Relative effectiveness and reach of different tobacco dependence medications and counseling strategies in patients with psychiatric comorbidity
 - Effectiveness and impact of tobacco dependence treatments within the context of nontobacco chemical dependency treatments
 - Importance and effectiveness of specialized assessment and tailored interventions
 - Impact of stopping tobacco use on psychiatric disorders and their management
- The 2008 CPG included 8,700 tobacco control studies, yet fewer than 2 dozen randomized clinical trials on smokers with current psychiatric diagnoses have been conducted (Prochaska et al., 2011)

Recommendations for Treating Patients in MH and SUD Care

- Overall, evidence-based smoking cessation treatments are effective for both patients with and without mental illness.
- Patients with mental illness or substance use disorder may have more severe nicotine addictions than the general population, and so may require more intensive treatment and intervention.
- Patients do not need to be free of mental health symptoms to quit smoking and should be supported if they express an interest in quitting.
- Patients with mental illness should be encouraged to use medications to quit smoking. They may need combination treatment, higher doses, and a longer duration of treatment than the general population. Additional monitoring by a psychiatrist may be necessary.

Clinical Case Discussion #1

GT is a 53 year old disabled veteran. He has smoked since he was 13 years old, currently 20 cigarettes per day, but as much as 40 per day in the past. His score on the Fagerström Test for Nicotine Dependence is 7, indicating very heavy dependence. He is diagnosed with PTSD, Depression and Alcohol Dependence in full sustained remission. GT reports that the only time he quit smoking was when incarcerated for 6 months, and he resumed immediately following release. He has several chronic medical conditions including type 2 diabetes, hypertension and early stages of emphysema. He currently lives in a hotel room that permits smoking, and describes that many of his neighbors smoke. He views smoking as an effective strategy for managing stress, and is unable to generate other coping strategies for stress management when asked. He's currently contemplating quitting, but is quite ambivalent.

Discussion:

- What intervention approach/strategies would be appropriate for GT?
- What are the key obstacles that might impede GT 's efforts at quitting smoking?
- What level of intervention would be most appropriate for GT?

Clinical Case Discussion #2

DR is a 38 year old veteran currently in outpatient treatment for substance use disorder. He has been abstinent from alcohol and drugs for 60 days but is smoking 15 cigarettes per day, and obtained a score of 5 on the FTND, indicating medium nicotine dependence. He resides in a recovery home where most of the residents are smokers (although smoking is not permitted inside the residence). He has previously quit smoking for extended periods of time (up to two years in the past), but returned to smoking in the context of alcohol and drug use. He has recently resumed exercising and voices a desire to adopt a healthy lifestyle that includes quitting smoking.

Discussion:

- What strategies would you use to engage DR in an active cessation attempt?
- What questions would you ask DR to help plan his quit attempt?

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