Vermont Cardiac Network
February 11, 2016
Tobacco Treatment 2016:
An Evidence Based Approach
Elizabeth Maislen, APRN, CTTS

Disclosures
- None.
- I do not intend to discuss off label use of any products.
- I don’t smoke and I don’t vape or hookah.
- When patients ask, “Did YOU ever smoke?” I tell them “It’s not about me today, it’s all about YOU.”
- Thank you to Susanne Tanski, MD

Cessation Treatments are Underused!
- The treatments recommended in the PHS guidelines are underused by smokers and health care providers.
- About 70% of smokers want to quit smoking, and about half try to quit each year.
- However, less than 10% succeed, in part because less than one-third of smokers who try to quit use proven cessation treatments.
- In 2010, less than half of smokers (48.3%) who saw a health professional in the past year reported receiving advice to quit.

The Surgeon General’s Report
- Cigarettes and other tobacco products have evolved into highly engineered, addictive and deadly products, containing thousands of harmful chemicals causing a wide range of diseases, cancers and premature deaths.
- 9 of 10 smokers regret ever having started.
- 60% of current smokers perceive themselves as “very addicted.”

What’s Different?
- Today’s cigarette smokers, especially women, have much higher risk for lung cancer, COPD and CVD, despite smoking fewer cigarettes.
- The design of the cigarette is different.
- More nicotine is absorbed when smoked.
- Combinations of products in cigarettes.


International Tobacco Control Study S. Glantz et al, 2-8-14; 2002-2011 longitudinal study
Tobacco is Carcinogenic
Nicotine, Although Addictive, is Not Carcinogenic

- Tobacco smoke contains greater than 80 carcinogenic agents and approximately 200 known toxins
- Smoking cigarettes with lower yields of tar has not been proven to decrease associated risks
- Nicotine is not carcinogenic
- Nicotine is the substance in cigarettes that causes addiction

Carcinogenic/Toxic Chemicals in Tobacco Smoke

<table>
<thead>
<tr>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
</tr>
<tr>
<td>Arsenic</td>
</tr>
<tr>
<td>Cadmium</td>
</tr>
<tr>
<td>Carbon monoxide</td>
</tr>
<tr>
<td>Formaldehyde</td>
</tr>
<tr>
<td>Hydrogen cyanide</td>
</tr>
<tr>
<td>Toluene</td>
</tr>
</tbody>
</table>

Where is it found?
- Tobacco plant
- Virtually all is from tobacco, even NRT

https://www.youtube.com/watch?v=nwVxu6Uugmg

The Health Consequences of Smoking: 50 Years of Progress
A Report of the Surgeon General
1964 - 2014

https://www.youtube.com/watch?v=Qerihm6aOY4
The Grim Statistics
Between 1964 and 2014:
- Over 20 million Americans died because of smoking, including
  - 2.5 million nonsmokers
  - More than 100,000 babies
- Smoking is still the leading cause of preventable disease and death in the United States.

What We’ve Learned
The Killer Cigarette
- Smoking risks are more deadly than 50 years ago.
- Smokers inhale over 7,000 chemical compounds.
- At least 70 CAUSE CANCER.

What We’ve Learned
21st Century Tobacco Use
Between 2010 and 2014 smoking caused
- Nearly half a million premature deaths a year
- More than 87% of all lung cancer deaths
- 61% of all pulmonary deaths
- 32% of all coronary deaths

The Killer Cigarette
- Smoking causes disease in nearly every organ.
- Secondhand smoke kills more than 41,000 nonsmokers every year.
- There is no safe level of SHS exposure and NO SAFE CIGARETTE.
Smoking and Children

- Today about half of all children 3-18 years of age are exposed regularly to cigarette smoke.
- Every day over 3,200 kids try their first cigarette and another 2,100 youth and young adults become daily smokers.
- Nearly 9 out of 10 smokers started before age 18.

Photo credit: Trinketsandtrash.org

Smoking and Children

Every adult who dies early because of smoking is replaced by two new young smokers.

If they keep smoking, at least one of the two will also die early from smoking.

The costs of smoking

- Annual smoking costs are more than $289 billion.
- We spend at least $132 billion in yearly medical care for adults.
- We lose at least $157 billion yearly in productivity costs when smokers get sick and die early.

The Power of Nicotine Addiction

- Nicotine is the primary addicting drug in cigarettes.
- Nicotine keeps people smoking longer and that causes more damage to the body.
- Nicotine patches, gum, and lozenges are safe when used as directed.

Nicotine

- Nicotine is the primary addicting drug in cigarettes.
- It can raise heart rate and blood pressure.
- It can result in premature births and low birth weight babies in women who smoke during pregnancy.
- It can be harmful to developing brains.
Smoking and Lung Cancer
- Today’s smokers are more likely to develop lung cancer than smokers 50 years ago.
- Lung cancer is the #1 cause of cancer death for men and women.
- Nearly 9 out of 10 lung cancers are caused by smoking.

New Cancer Findings
TWO more cancers are caused by smoking:
- Liver cancer
- Colorectal cancer – the second deadliest behind lung cancer

SMOKING keeps cancer treatments from working as well as they should.

Smoking – The Cancer Trigger
Smoking is now known to cause 13 different types of cancer—almost everywhere in the body.
- 1 out of 3 U.S. cancer deaths are tobacco-related.

Smoking – The Breath Blocker
- COPD rates have risen steadily since 1964.
- Nearly 8 out of 10 COPD deaths are from smoking.
- COPD patients have higher risk for lung cancer and heart disease.
- Women who smoke are now dying from COPD in the same numbers as men who smoke.

Smoking – The Heart Stopper
Cardiovascular Disease (CVD)
- CVD is the biggest killer in the U.S.
- It causes more than 800,000 deaths every year.
- Smoking is a major cause of CVD.
- SHS increases the risk for heart attack or stroke, even for nonsmokers.

Cardiovascular disease includes:
- Coronary heart disease
- High blood pressure
- Heart attack
- Stroke
- Abdominal aortic aneurysm
- Peripheral arterial disease
Smoking – The Heart Stopper
- Smoking causes cells lining veins and arteries to swell.
- Narrower arteries mean reduced blood flow to the heart, brain, and organs.
- Clots can block narrowed arteries, causing heart attack, stroke, and even sudden death.
- Even occasional smoking damages blood vessels.

Smoking and Reproduction
- Smoking also causes reproductive issues for men:
  - Smoking can cause erectile dysfunction (ED).
  - Smoking damages DNA in sperm.

Smoking and Diabetes
- Diabetes is the 7th leading cause of death in the U.S.
  - Smoking causes type 2 diabetes.
  - Smokers are 30-40% more likely to develop type 2 diabetes than nonsmokers.

Smoking and Diabetes
- Diabetic smokers:
  - Have difficulty regulating insulin levels.
  - Have higher risk of heart disease, blindness, kidney failure, and nerve and blood vessel damage to feet and legs.

Smoking and the Immune System
- Smoking harms the immune system and causes autoimmune disorders.
- Smoking is a cause of rheumatoid arthritis (RA).
- RA treatment can be less effective for smokers.

Smoking Today – The Persistent Epidemic
- Cigarettes cause almost all tobacco-related disease and death.
  - Smoking claims nearly 500,000 lives every year.
  - More than 16 million people have at least one smoking-related disease.
  - 88 million Americans continue to be exposed to SHS.
Smoking Today – The Persistent Epidemic
- Lower smoking rates have saved 8 million lives and added about three years to average life expectancy.
- 50 years after the first SG report, 18% of Americans smoke compared to 43% in 1965.
- Today 42 million adults and 3 million middle and high school students are smokers.
- We have made progress, but there is still so much more to do.

Saving Millions of Lives – Doing Much More
- We know what works to lower smoking rates:
  - Smokefree policies in public places
  - Make smoking the exception – not the norm
  - Easy-to-get affordable smoking cessation treatments

Cessation – Lifeline to a Tobacco-Free Life
- Most smokers want to quit and half already have.
- Cessation therapies improve your chances of quitting successfully.
- Talk to your doctor, and call 1-800-QUIT-NOW or go to http://www.SmokeFree.gov for free help.

We Can Be Tobacco-Free
- The time is NOW to begin a tobacco-free future.
- We can break the cycle of sickness, disability and death caused by smoking.
- We can reduce the disease and death caused by smoking until the scourge of the tobacco use epidemic becomes a minor public health nuisance.

“CIGARETTE SMOKING...

is the chief, single, avoidable cause of death in our society and the most important public health issue of our time.”

C. Everett Koop, M.D., former U.S. Surgeon General

All forms of tobacco are harmful.

Trends in cigarette current smoking among persons aged 18 or older

Male
Female

20.6% of adults are current smokers

22.5%
17.3%

70% want to quit

Graph provided by the Centers for Disease Control and Prevention. 1955 Current Population Survey; 1965–2005 NHIS. Estimates since 1992 include some-day smoking.

Henry Waxman 1994

It is sometimes easier to invent fiction than to face the truth. The truth is that cigarettes are the single most dangerous consumer product ever sold. Nearly a half million Americans die every year as a result of tobacco. This is an astounding, almost incomprehensible statistic. Imagine our Nation’s outrage if two fully loaded jumbo jets crashed each day, killing all aboard. Yet that is the same number of Americans that cigarettes kill every 24 hours.


PHS

Henry Waxman 1994

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Current Cigarette and Smokeless Tobacco Use among Adults by Demographic Characteristics

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Percentage of Smokers Attempting to Quit

National Average: 55.7%

Better
In Vermont, 62.0% of adults made a quit attempt, ranking 4th.

Worse

Source: National Adult Tobacco Survey, 2009–2010
### Vermont

#### Quitline Utilization

In 2010, the Vermont quitline received 3,386 calls, and 1,536 tobacco users (an estimated 1.8% of all tobacco users in the state) received telephone counseling, cessation medications, or both from the state quitline.

#### Addictiveness of Smoking

In Vermont, 90.5% of adults thought that smoking is very addictive. The range across all states was 90.5% to 80.6%. Vermont ranked 1st among the states.

### New Hampshire

#### Quitline Utilization

In 2010, the New Hampshire quitline received 906 calls, and 175 tobacco users (an estimated 0.1% of all tobacco users in the state) received telephone counseling, cessation medications, or both from the state quitline.

#### Addictiveness of Smoking

In New Hampshire, 88.3% of adults thought that smoking is very addictive. The range across all states was 90.5% to 80.6%. New Hampshire ranked 7th among the states.
NEW HAMPSHIRE

Smoke-Free Legislation

<table>
<thead>
<tr>
<th>Workplaces</th>
<th>Restaurants</th>
<th>Bars</th>
<th>Local Laws Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* Designated Smoking Areas
* No smoking in buildings
1 No Restrictions
4 Allowed in smoking or non-smoking areas that prohibit reentry

Source: STATE System, June 2012

Age-standardized total cigarette smoking prevalence, males, 1996 and 2012.

Geographic Variability of Smoking Prevalence Rates

There is variability of smoking prevalence rates from state to state, ranging from 32.8% in Kentucky to 16.4% in California and 12.7% in Utah.

Age-standardized total cigarette smoking prevalence, females, 1996 and 2012.

Environment for Tobacco Control Is Evolving

- Tobacco Taxation
  - Price increase for tobacco products
  - Reduction in smokers

- Smoking Bans
  - A total of 48 states restrict smoking in government buildings
  - A total of 31 states restrict smoking in private workplaces

WHO Framework Convention on Tobacco Control
“Smoking will retard wound healing, whether the wound is surgical or the result of trauma or burns.”


“Wound complications after breast reduction surgery or mastectomy are 30-50% higher in women who smoke.”


“Patients who smoked regularly before surgery had twice the risk of wound infections as non-smokers.”


“Recovery room stays are 20% longer for smokers than non-smokers.”


“Smoking slows the healing of peptic duodenal ulcers and increases the rate of ulcer relapse.”


“A smoker’s broken bones take almost twice as long to heal compared to those of a non-smoker.”

USA Today, February 1995.
It pays to quit smoking—Literally!

- Moderate smokers (1 ppd) = $8/day, $64/week, $3328 a year, that’s $33,280 in 10 years!
- Heavy smoker (3 ppd) = $24/day, $168/week, $8736 a year, that’s $87,360 in 10 years!
- Smokers may spend up to 8% of their annual income a year on the purchase of cigarettes, which can profoundly affect the financial well being of their families.

“Indeed it is difficult to identify any other condition that presents such a mix of lethality, prevalence, and neglect, despite effective and readily available interventions.”

Fiore et al, U.S. Department of Health and Human Services June 2000

Why Quit?
Potential Life Time Health Benefits of Smoking Cessation

So Why Do People Continue to Smoke?

Addiction — Habitual psychological and physiological dependence on a substance or practice which is beyond voluntary control

- They smoke because they are addicted to nicotine
- There is a clear link between smoking, nicotine receptors, and addiction

STEP BACK AND RUN INTO THIS POSTER HEAD FIRST

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Nicotine Kinetics

- High concentrations reach the brain within 10 to 16 seconds of smoke inhalation
- Each cigarette provides repetitive and transient high blood concentrations
- Recurrent cigarette smoking is needed to maintain elevated levels

The Cycle of Nicotine Addiction

- The half-life of nicotine is only 2 hours. This along with its rapid clearance from the CNS results in withdrawal symptoms occurring quickly. Withdrawal symptoms, combined with cravings for tobacco, result in behaviors that reinforce the reward and satisfaction from nicotine starting the addiction cycle over again.

Peripheral Effects of Nicotine

- Increased Heart rate
- Increased Blood pressure
- Vasoconstriction
- Increased metabolic rate
- Lipolysis
- Skeletal muscle relaxation
- EEG desynchronization
- Increased ACTH Adrenal steroids

Psychological Effects of Nicotine

- Stimulation
- Arousal
- Memory
- Attention
- Increased speed of processing
- Relaxation
- Anxiolytic/stress reduction
- Analgesia
- Mood improvement
- Appetite suppression
- Social facilitation

Nicotine May Cause Up-Regulation & Desensitization of Receptors Resulting in Tolerance, Withdrawal, & Craving

- Tolerance typically develops after long-term nicotine use
- Tolerance is related to both the up-regulation (increased number) and the desensitization of nicotine receptors in the VTA
- A drop in nicotine level, in combination with the up-regulation and decreased sensitivity of the nicotinic receptor, can result in withdrawal symptoms and cravings
- Smokers have the ability to self-regulate nicotine intake by the frequency of cigarette consumption and the intensity of inhalation
- In order to maintain a steady nicotine level, smokers generally titrate their smoking to achieve maximal stimulation and avoid symptoms of withdrawal and craving
NICOTINE

ANNUAL SMOKING ATTRIBUTABLE ECONOMIC COSTS

Health-care expenditures
Lost productivity costs
Ttl fd l
$96.7 billion

$97.6 billion

Societal costs: $10.28 per pack of cigarettes smoked
Total economic burden of smoking, per year
Billions of US dollars


Total Medicare program costs
Total federal-sate Medicaid program costs
$18.9 billion
$194 billion

2008 PHS Clinical Practice Guideline: Treating Tobacco Use and Dependence Update

History:
1. 1996—Initial Guideline published; literature from 1975–1995; approximately 3,000 articles
2. 2000—Revised Guideline published; literature from 1995–1999; approximately 6,000 articles
3. 2008—Updated Guideline published; literature from 1999–2007; approximately 8,700 total articles

Combinations: Medication and Counseling

Effectiveness of and estimated abstinence rates for the combination of counseling and medication versus counseling alone (n = 9 studies)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of arms</th>
<th>Estimated odds ratio (95% C.I.)</th>
<th>Estimated abstinence rate (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling alone</td>
<td>11</td>
<td>1.0</td>
<td>14.6</td>
</tr>
<tr>
<td>Medication and counseling</td>
<td>13</td>
<td>1.7 (1.3, 2.1)</td>
<td>22.1 (18.1, 26.8)</td>
</tr>
</tbody>
</table>

Pro-Active Quitlines

Effectiveness of and estimated abstinence rates for quitline counseling compared to minimal interventions, self-help or no counseling (n = 9 studies)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Number of arms</th>
<th>Estimated odds ratio (95% C.I.)</th>
<th>Estimated abstinence rate (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal or no counseling or self-help</td>
<td>11</td>
<td>1.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Quitline counseling</td>
<td>11</td>
<td>1.6 (1.4, 1.8)</td>
<td>12.7 (11.3, 14.2)</td>
</tr>
</tbody>
</table>

Pro-Active Quitlines

Effectiveness of and estimated abstinence rates for quitline counseling and medication compared to medication alone (n = 6 studies)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Number of arms</th>
<th>Estimated odds ratio (95% C.I.)</th>
<th>Estimated abstinence rate (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication alone</td>
<td>6</td>
<td>1.0</td>
<td>23.2</td>
</tr>
<tr>
<td>Medication and quitline counseling</td>
<td>6</td>
<td>1.3 (1.1, 1.6)</td>
<td>28.1 (24.5, 32.0)</td>
</tr>
</tbody>
</table>

Medications are effective, but they are just one component of comprehensive treatment for tobacco cessation. Behavior change is equally important.

Through exposure, having a professional quitline counselor can help to stop the smoking habit. This list of tips will aid a smoker.

CLOSE TO HOME © 2000 John McPherson. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved.
Medication

Seven first-line medications shown to be effective and recommended for use by the Guideline Panel:

- Nicotine Patch
- Nicotine Gum
- Nicotine Lozenge
- Nicotine Inhaler
- Nicotine Nasal Spray
- Bupropion SR
- Varenicline

Absorption of Nicotine

- Nicotine is carried on tar droplets
- Absorption depends on pH
- Most cigarette smoke is acidic and absorbed by the lungs, 1-2 mg nicotine/cigarette
- Some tobacco smoke (pipe, cigar) is alkaline and absorbed through the mouth, amount absorbed is then highly variable.

Nicotine Patches

1mg/1cigarette
21 mg
14 mg
7 mg

Nicotine Inhaler

Nicotine Gum and Lozenges 2 & 4 mg Sizes
Medication Recommendation

**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. Effective combination medications are:

- Long-term (> 14 weeks) nicotine patch + other NRT (gum and spray)
- The nicotine patch + the nicotine inhaler
- The nicotine patch + bupropion SR.

(Strength of Evidence = A)

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Varenicline

**Effectiveness and abstinence rates for various medications and medication combinations compared to placebo at 6-months post-quit (n = 86 studies)**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Number of arms</th>
<th>Estimated odds ratio (95% C.I.)</th>
<th>Estimated abstinence rate (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>80</td>
<td>1.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Varenicline (2 mg/day)</td>
<td>5</td>
<td>3.1 (2.5, 3.8)</td>
<td>33.2 (28.9, 37.8)</td>
</tr>
</tbody>
</table>

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Bupropion

**Background**

- Monocyclic antidepressant
- Inhibits reuptake of norepinephrine and dopamine
- May inhibit nicotinic ACH receptor function
- Mechanism in helping smokers stop is not clear
- May attenuate weight gain in abstinent smokers

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Varenicline

**Mode of Action**

- Partial agonist with specificity for the α4β2 nicotinic acetylcholine receptor
- Agonist action: stimulates the nACHr to ↓ nicotine withdrawal
- Antagonist action: blocks the nACHr to ↓ the reinforcing effect of smoking
**Varenicline: FDA Warning**

“All patients being treated with Chantix should be observed for neuropsychiatric symptoms including changes in behavior, agitation, depressed mood, suicidal ideation, and suicidal behavior. These symptoms, as well as worsening of pre-existing psychiatric illness, have been reported in patients attempting to quit smoking while taking Chantix...”

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**Treatment Efficacy and Number of Sessions**

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 sessions</td>
<td>12.4% est. abstinence</td>
</tr>
<tr>
<td>2-3 sessions</td>
<td>16.3%</td>
</tr>
<tr>
<td>4-8 sessions</td>
<td>20.9%</td>
</tr>
<tr>
<td>&gt;8 sessions</td>
<td>24%</td>
</tr>
</tbody>
</table>

- No difference in outcome between group and individual counseling
- Telephone counseling is effective

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**Electronic Cigarette: A Smoking Cessation Device?**

- Battery operated devices that deliver vaporized nicotine
  - Cartridges contain nicotine, flavoring agents, and other chemicals
- Battery warms cartridge; user inhales nicotine vapor or ‘smoke’
- Available on-line and in shopping malls
  - Not labeled with health warnings
  - Preliminary FDA testing found some cartridges contain carcinogens and impurities (e.g., diethylene glycol)
  - No data to support claims that these products are a safe alternative to smoking

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**ELECTRONIC CIGARETTES**

- Cigars
- Blunts
- Hookah or Water Pipe
- Vaping products
- Smokeless tobacco
  - Chewing tobacco
  - Snuff: moist and dry, sachet or Snus “Dip”
  - Dissolvables

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**Other forms of Tobacco**

- Cigars
- Blunts
- Hookah or Water Pipe
- Vaping products
- Smokeless tobacco
  - Chewing tobacco
  - Snuff: moist and dry, sachet or Snus “Dip”
  - Dissolvables
Dual Tobacco Use

- Combustible plus non-combustible tobacco types
- Convenient packaging facilitates availability and ease of using both types of products.
- Snus package can fit just about anywhere, can be used in places where you cannot smoke.

From Cigarette to Vapor Pen, an evolution in technology

Roll Your Own Cigarettes

- Roll in rolling machine or by hand "rollies"
- Use increases when branded cigarette prices go up
- Pipe tobacco
- Greater tar and nicotine yields/cigarette
- Likely inhale differently or more deeply, depositing smoke, nicotine and toxins in lungs
- Greater urinary concentrations of toxins
- Increases risks for lung and oral cancers
- Low cost = more affordable

Cloud Vape Pen
The Electronic Cigarette


What are the public health harms?
- Re-normalizing the image of smoking
- Allowed in places where smoking is not allowed
- Advertising is completely unrestricted, with TV ads for the first time since 1971
- Largely indistinguishable from cigarettes
- Second-hand vapor is NOT just water vapor
- Emit variable levels of nicotine

So what to do?
- Research is imperative to assess second hand vapor effects (of all kinds), addiction potential and dual-use maintenance
- Must have a regulated product for an informed consumer, with fully disclosed labeling
- Until we know more about “e-anything” and cessation, we can still recommend medicinal NRT, quit lines and support while people are becoming non-tobacco users

Carbon Monoxide Monitor
CPT Code 94250

- [Carbon Monoxide Monitor](https://www.ispot.tv/ad/7fnS/njoy-e-cigarette-return-the-favor-song-by-avicii)

How high is your COP?
**PHS**

**Find a Quit Method That Works For You**

**smokefree.gov**

**The "5 A's" Model for Treating Tobacco Use and Dependence - 2000**

- **Ask** about tobacco use. Identify and document tobacco use status for every patient at every visit.
- **Advise** to quit. In a clear, strong and personalized manner urge every tobacco user to quit.
- **Assess** willingness to make a quit attempt. Is the tobacco user willing to make a quit attempt at this time?
- **Assist** in quit attempt. For the patient willing to make a quit attempt, use counseling or pharmacotherapy to help him or her quit.
- **Arrange** followup. Schedule followup contact, preferably within the first week after the quit date.

**BRIEF COUNSELING: ASK, ADVISE, REFER**

- **ASK** about tobacco USE
- **ADVISE** tobacco users to QUIT
- **REFER** to other resources

Patient receives assistance, with follow-up counseling arranged, from other resources such as the tobacco quitline

**CLINICIANS CAN MAKE a DIFFERENCE**

With help from a clinician, the odds of quitting approximately doubles.

<table>
<thead>
<tr>
<th>Type of Clinician</th>
<th>Estimated abstinence at 5 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>No clinician</td>
<td>1.0</td>
</tr>
<tr>
<td>Self-help material</td>
<td>1.1</td>
</tr>
<tr>
<td>Nonphysician clinician</td>
<td>1.7</td>
</tr>
<tr>
<td>Physician clinician</td>
<td>2.2</td>
</tr>
</tbody>
</table>

*Compared to patients who receive no assistance from a clinician, patients who receive assistance are 1.7–2.2 times as likely to quit successfully for 5 or more months.*

**WHAT ARE “TOBACCO QUITLINES”?**

- Tobacco cessation counseling, provided at no cost via telephone to all Americans
- Staffed by trained specialists
- Up to 4–6 personalized sessions (varies by state)
- Some state quitlines offer pharmacotherapy at no cost (or reduced cost)

Most health-care providers, and most patients, are not familiar with tobacco quitlines.
Insurance Coverage of Cessation Treatments is Cost Effective

- Cessation treatments are both clinically effective and highly cost-effective relative to interventions for other clinical disorders.
- Cost-effectiveness analyses have shown that tobacco dependence treatment compares favorably with routinely reimbursed medical interventions such as the treatment of hypertension and high cholesterol, as well as preventive screening interventions such as periodic mammography and PAP tests.

Current Status of Cessation Coverage

- Nine states have laws or regulations in place requiring at least some private insurance plans to cover certain cessation treatments.
- (Colorado, Illinois, Maryland, New Jersey, New Mexico, North Dakota, Oregon, Rhode Island, and Vermont)

Medicaid Coverage and the ACA

- Section 4107 of the Affordable Care Act requires all state Medicaid programs to provide a comprehensive tobacco cessation benefit as defined by the USPHS guidelines to pregnant women who are enrolled in Medicaid, effective October 2010.
- As of January 2014, Section 2502 of the law bars state Medicaid programs from excluding cessation medications, including over-the-counter medications, from coverage.
Medicare Coverage

- Medicare recipients have access to individual cessation counseling and prescription cessation medications.
- The benefit covers two quit attempts a year and four counseling sessions per quit attempt.
- Medicare copayment, coinsurance, and deductibles for cessation treatments are waived under the Affordable Care Act, effective January 1, 2011.

HELPING PATIENTS QUIT IS a CLINICIAN'S RESPONSIBILITY

Tobacco users don't plan to fail. Most fail to plan.

Clinicians have a professional obligation to address tobacco use and can have an important role in helping patients plan for their quit attempts.

THE DECISION TO QUIT LIES IN THE HANDS OF EACH PATIENT.

Basic Concepts

- Treat tobacco dependence for the serious medical problem it is
- Motivational counseling plus pharmacotherapy
- Dose response to counseling
- Higher nicotine patch doses are better
- Combinations are better
- Longer treatment is better. This is not strep throat nor a UTI

FIVE YEAR SURVIVAL
65 year old patients with:

- Early stage non-small cell lung CA
  33% for continued smokers
  70% for smokers who quit

- Limited stage small cell lung CA
  29% for continued smokers
  63% for smokers who quit

The real reason dinosaurs became extinct
Tobacco Dependence
• Tobacco dependence is a chronic disease, with most smokers making multiple quit attempts before succeeding.
• Many of these smokers require repeated intervention.

THANK YOU!
(For not smoking)