An estimated 4,800 compounds in tobacco smoke, including 11 proven human carcinogens

**Gases**
- Carbon monoxide
- Hydrogen cyanide
- Ammonia
- Benzene
- Formaldehyde

**Particles**
- Nicotine
- Nitrosamines
- Lead
- Cadmium
- Polonium-210

Nicotine is the addictive component of tobacco products, but it does NOT cause the ill health effects of tobacco use.
## ANNUAL U.S. DEATHS ATTRIBUTABLE to SMOKING, 2000–2004

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Number</th>
<th>Percent of all smoking-attributable deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular diseases</td>
<td>128,497</td>
<td>29%</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>125,522</td>
<td>28%</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>103,338</td>
<td>23%</td>
</tr>
<tr>
<td>Second-hand smoke</td>
<td>49,400</td>
<td>11%</td>
</tr>
<tr>
<td>Cancers other than lung</td>
<td>35,326</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>1,512</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

**TOTAL: 443,595 deaths annually**

FOUR MAJOR CONCLUSIONS:

- Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general.
- Quitting smoking has immediate as well as long-term benefits, reducing risks for diseases caused by smoking and improving health in general.
- Smoking cigarettes with lower machine-measured yields of tar and nicotine provides no clear benefit to health.
- The list of diseases caused by smoking has been expanded.
HEALTH CONSEQUENCES OF SMOKING

- Cancers
  - Acute myeloid leukemia
  - Bladder and kidney
  - Cervical
  - Esophageal
  - Gastric
  - Laryngeal
  - Lung
  - Oral cavity and pharyngeal
  - Pancreatic

- Pulmonary diseases
  - Acute (e.g., pneumonia)
  - Chronic (e.g., COPD)

- Cardiovascular diseases
  - Abdominal aortic aneurysm
  - Coronary heart disease
  - Cerebrovascular disease
  - Peripheral arterial disease

- Reproductive effects
  - Reduced fertility in women
  - Poor pregnancy outcomes (e.g., low birth weight, preterm delivery)
  - Infant mortality

- Other effects: cataract, osteoporosis, periodontitis, poor surgical outcomes

FINANCIAL IMPACT OF SMOKING

Buying cigarettes every day for 50 years @ $5.51 per pack
Money banked monthly, earning 2% interest

- $172,851
- $345,701
- $518,551

Dollars lost, in thousands
QUITTING: HEALTH BENEFITS

Time Since Quit Date

- **2 weeks to 3 months**: Lung cilia regain normal function
- **1 to 9 months**: Ability to clear lungs of mucus increases
- **1 year**: Coughing, fatigue, shortness of breath decrease
- **5 years**: Risk of stroke is reduced to that of people who have never smoked
- **10 years**: Risk of lung cancer death rate drops to half that of a continuing smoker
- **after 15 years**: Risk of CHD is similar to that of people who have never smoked

- **Excess risk of CHD decreases to half that of a continuing smoker**
- **Lung cancer death rate drops to half that of a continuing smoker**
- **Risk of cancer of mouth, throat, esophagus, bladder, kidney, pancreas decrease**
- **Circulation improves, walking becomes easier**

- **Lung function increases up to 30%**
Tobacco Dependence: A 2-Part Problem

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

**Physiological**
- The addiction to nicotine
  - Treatment
  - Medications for cessation

**Behavioral**
- The habit of using tobacco
  - Treatment
  - Behavior change program
OVERVIEW VIDEO-SMOKING CESSATION

- Video Time!
Tobacco Comes in Many Forms

- Cigararettes - second hand smoke is unfiltered that everyone around them inhales
- Cigars - nicotine is absorbed in the mouth even though they don’t inhale
- Chew or Snuff - nicotine absorbed and chemicals known to cause oral cancers
HOOKAH (WATERPIPE SMOKING)

- Also known as Shisha, Narghile, Goza, Hubble bubble
- Tobacco flavored with fruit pulp, honey, and molasses
- Increasingly popular among young adults in coffee houses, bars, and lounges 7-10% of U.S. college students use hookah
- Nicotine, tar and carbon monoxide levels comparable to or higher than those in cigarette smoke
ELECTRONIC CIGARETTES

- Battery operated devices that deliver vaporized nicotine
  - Cartridges contain nicotine, flavoring agents, and other chemicals
- Battery warms cartridge; user inhales nicotine vapor or ‘smoke’
- 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
Strategies to Address Tobacco Use

- Multifaceted approach to address nicotine dependence
  - Routinely assessing consumers for tobacco use
  - Integrating tobacco-cessation into treatment plans
  - Relapse planning
  - Educational activities
  - Freedom from Smoking classes
  - Nicotine replacement therapies (NRTs)
  - Incentives for quitting
  - Building a strong “wellness” culture
NICOTINE REPLACEMENT THERAPIES

- MO HealthNet covers 2 quit attempts of up to 12 weeks of intervention per lifetime
  - Nicorette Gum, Nicotrol Inhaler, Nicorette Lozenge, Nicotrol nasal spray, Nicoderm, Chantix, Zyban/Wellbutrin
  - To access coverage – Clients should call the Participants Services Unit at 1-800-392-2161

- Medicare Prescription Drug Plans – Some plans offer coverage for smoking cessation
  - Dual Eligible clients may switch plans at any time to enroll in a plan which covers cessation aids.
When Your Client Wants to Quit

- Ask-Advise-Refer
- Integrate smoking cessation into treatment plans
- Assist with creating plan to quit
- Assist with obtaining NRTs
  - Refer to psychiatrist or PCP for assistance with prescription NRTs
- Refer to additional resources for support
  - Freedom from Smoking
  - Toll-free quit line: 1-800-QUIT-NOW
  - Online support programs
FDA-APPROVED MEDICATIONS FOR CESSATION

Nicotine polacrilex gum
- Nicorette (OTC)
- Generic nicotine gum (OTC)

Nicotine lozenge
- Nicorette Lozenge (OTC)
- Nicorette Mini Lozenge (OTC)
- Generic nicotine lozenge (OTC)

Nicotine transdermal patch
- NicoDerm CQ (OTC)

Nicotine nasal spray
- Nicotrol NS (Rx)

Nicotine inhaler
- Nicotrol (Rx)

Bupropion SR (Zyban)

Varenicline (Chantix)

These are the only medications that are FDA-approved for smoking cessation.
**Using the NRT’s or FDA Approved Meds Double the Quit Rate**

**Over the Counter NRT’s:**

Nicotine patch in 3 strengths 21mg, 14mg and 7mg  1ppd smokers use 21mg for steady state of Nicotine

Nicotine Lozenge  and gum come in 4mg and 2mg for cravings to use thru the day

**Prescription needed for these NRT’s and medications:**

Nicotine nasal spray fastest method of delivery but has a burning feeling in nose

Nicotine inhaler  most like a cigarette but not as popular as others above

Bupropion SR (Zyban) also known as wellbutrin to reduce cravings for nicotine

Varenicline (Chantix) most effective but can produce vivid dreams and watch for SI

- Reduces physical withdrawal from nicotine, these are clean nicotine products
- Eliminates the immediate, reinforcing effects of nicotine that is rapidly absorbed via tobacco smoke
- Allows patient to focus on behavioral and psychological aspects of tobacco cessation
The Clinical Practice Guideline makes no recommendation regarding use of medications in pregnant smokers
- Insufficient evidence of effectiveness
- Category C: varenicline, bupropion SR
- Category D: prescription formulations of NRT

“Because of the serious risks of smoking to the pregnant smoker and the fetus, whenever possible pregnant smokers should be offered person-to-person psychosocial interventions that exceed minimal advice to quit.” (p. 165)

PHARMACOTHERAPY: OTHER SPECIAL POPULATIONS

Pharmacotherapy is **not** recommended for:

- Smokeless tobacco users
  - No FDA indication for smokeless tobacco cessation
- Individuals smoking fewer than 10 cigarettes per day
- Adolescents
  - Nonprescription sales (patch, gum, lozenge) are restricted to adults ≥18 years of age
  - NRT use in minors requires a prescription

Recommended treatment is behavioral counseling.

NICOTINE GUM

Nicorette (GlaxoSmithKline); generics

- Resin complex
  - Nicotine
  - Polacrilin

- Sugar-free chewing gum base

- Contains buffering agents to enhance buccal absorption of nicotine

- Available: 2 mg, 4 mg; original, cinnamon, fruit, mint (various), and orange flavors
Nicotine polacrilex formulation
- Delivers ~25% more nicotine than equivalent gum dose
Sugar-free mint, cherry flavors
Contains buffering agents to enhance buccal absorption of nicotine
Available: 2 mg, 4 mg
Nicotine is well absorbed across the skin
Delivery to systemic circulation avoids hepatic first-pass metabolism
Plasma nicotine levels are lower and fluctuate less than with smoking
NICOTINE NASAL SPRAY
Nicotrol NS (Pfizer)

- Aqueous solution of nicotine in a 10-ml spray bottle
- Each metered dose actuation delivers
  - 50 mcL spray
  - 0.5 mg nicotine
- ~100 doses/bottle
- Rapid absorption across nasal mucosa
Nicotine inhalation system consists of:

- Mouthpiece
- Cartridge with porous plug containing 10 mg nicotine and 1 mg menthol

Delivers 4 mg nicotine vapor, absorbed across buccal mucosa
BUPROPION SR
Zyban (GlaxoSmithKline); generic

- Nonnicotine cessation aid
- Sustained-release antidepressant
- Oral formulation
VARENICLINE
CHANTIX (PFIZER)

- Nonnicotine cessation aid
- Partial nicotinic receptor agonist
- Oral formulation
COMBINATION PHARMACOTHERAPY

Regimens with enough evidence to be ‘recommended’ first-line

- **Combination NRT**
  
  Long-acting formulation (patch)
  
  - Produces relatively constant levels of nicotine
  
  **PLUS**
  
  Short-acting formulation (gum, inhaler, nasal spray)
  
  - Allows for acute dose titration as needed for nicotine withdrawal symptoms

- **Bupropion SR + Nicotine Patch**
COMPLIANCE IS KEY TO QUITTING

- Promote compliance with prescribed regimens.
- Use according to dosing schedule, NOT as needed.
- Consider telling the consumer:
  - “When you use a cessation product it is important to read all the directions thoroughly before using the product. The products work best in alleviating withdrawal symptoms when used correctly, and according to the recommended dosing schedule.”
Tobacco cessation requires behavior change

- Fewer than 5% of people who quit without assistance are successful in quitting for more than a year.
- Few patients adequately PREPARE and PLAN for their quit attempt.
- Many patients do not understand the need to change behavior.
- Patients think they can just “make themselves quit.”

Behavioral counseling is a key component of treatment for tobacco use and dependence.
CHANGING BEHAVIOR (CONT’D)

- Often, patients automatically smoke in the following situations:
  - When drinking coffee
  - While driving in the car
  - When bored
  - While stressed
  - While at a bar with friends
  - After meals
  - During breaks at work
  - While on the telephone
  - While with specific friends or family members who use tobacco

- Behavioral counseling helps patients learn to cope with these difficult situations without having a cigarette.
With help from a clinician, the odds of quitting approximately doubles.

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.

**Type of Clinician**

- **No clinician**: Estimated abstinence at 5+ months = 1.0
- **Self-help material**: Estimated abstinence at 5+ months = 1.1
- **Nonphysician clinician**: Estimated abstinence at 5+ months = 1.7
- **Physician clinician**: Estimated abstinence at 5+ months = 2.2

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

ASSIST

ARRANGE
STEP 1: ASK

■ **ASK** about tobacco use

■ “Do you, or does anyone in your household, ever smoke or use any type of tobacco?”

■ “We like to ask our patients about tobacco use, because it has the potential to interact with many medications.”

■ “We like to ask our patients about tobacco use, because it contributes to many medical conditions.”
STEP 2: ADVISE

ADVISE tobacco users to quit (clear, strong, personalized)

- “It’s important that you quit as soon as possible, and I can help you.”
- “Cutting down while you are ill is not enough.”
- “Occasional or light smoking is still harmful.”
- “I realize that quitting is difficult. It is the most important thing you can do to protect your health now and in the future. I have training to help my patients quit, and when you are ready, I will work with you to design a specialized treatment plan.”
STEP 3: REFER

 Refer tobacco users to other resources

Referral options:
- A doctor, nurse, pharmacist, or other clinician, for additional counseling
- A local group program
- The support program provided free with each smoking cessation medication
- The toll-free telephone quit line: 1-800-QUIT-NOW
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

- Fewer than 5% of people who quit without assistance are successful in staying quit for more than 1 year.
- Compared to smokers who receive assistance from no clinicians, smokers who receive assistance from two or more clinicians are 2.4 times as likely to quit successfully for 5 or more months.
- Behavioral counseling and support is a key component of treatment for tobacco use and dependence.
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

Psychiatrists

- Nicotine can affect the efficacy of psychotropic medication.
- Signs of nicotine withdrawal, such as feeling irritable, angry, or restless, can be mistaken for an increase in psychiatric symptoms.
- It can be helpful to notify a psychiatrist PRIOR to quitting.
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

Primary Care Physicians (PCPs)

- Can assist in the prescribing of some NRTs, such as the nicotine nasal spray, inhaler and Bupropion SR and Chantix.
- Can advise on how staying quit can effect someone’s quality of life, or other health conditions.
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

Healthcare Home Nurse Care Managers

- Nurses may be able to assist in providing support and encouragement as well as basic education regarding smoking cessation and NRTs.
- At some facilities, they may have access to CO meters or may run Freedom From Smoking Groups.
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

Nursing Staff

• May be able to assist a consumer in obtaining NRTs and can assist in educating about the safe and effective use of these tools.

• May also assist in providing education regarding how smoking cessation may affect an individual’s other medications or any medical health concerns.
INTEGRATING ADDITIONAL TREATMENT TEAM MEMBERS

Family Members

- If a consumer lives with someone who smokes in a shared living space, that can make it difficult to be successful.
- Encouraging consumers to identify other members of support, to create a holistic approach, allows them the best chance at success.
- Freedom From Smoking and other evidence based treatment modalities encourage a consumer to identify a “quit buddy” from within their support system.
WHY USE MOTIVATIONAL INTERVIEWING WITH SMOKING CESSATION

- Business as Usual Approach
- Motivational Interviewing Approach
The Stage of Pre-contemplation

They may have no interest in quitting smoking. You may see denial, defiance, rationalization and lack of interest.

Counseling approach: Use acceptance, patience and introduce ambivalence.

ASK questions like: Is there any way you would be better off if you quit smoking?

The goal here is to help move the Client to contemplation.
PDP Objective at this Stage of Change

- **Objective**: Client will openly discuss tobacco use with CSS quarterly.
- **Intervention**: CSS will facilitate discussion and assess for change talk with client quarterly regarding tobacco use. CSS/NCM will offer educational materials regarding tobacco use.
- **Responsible person(s)**: Client, CSS, NCM
- **Frequency**: Every 3 months
- **Duration**: 12 months
- **Baseline**: Client has not discussed tobacco use
- **Start date**: 00/00/0000
The stage of Contemplation

Ambivalence is seen and you may hear:
I want to quit but I like smoking.

Counseling approach: acceptance, patience, identify resistance and explore both sides of ambivalence.

Ask questions like:
What would you miss about smoking?

The goal here is to move from contemplation to preparation.
PDP Objective at this Stage of Change

- **Objective**: Client will explore the pros and cons of smoking cessation with CSS monthly.

- **Intervention**: CSS will offer educational materials in favor of smoking cessation. CSS will encourage client to schedule an appointment with NCM to discuss the benefits of smoking cessation. CSS will facilitate discussion and assess for change talk monthly regarding smoking cessation.

- Responsible person(s): Client, CSS, NCM
- Frequency: Monthly
- Duration: 6 months
- Baseline: Client openly discusses tobacco use
- Start date: 00/00/0000
RESPONDING TO CHANGE TALK

- Work with a partner
- Decide who will be the first speaker
- Speakers, will take on the “role” of a client, and speak to the listener about the following topic: “I can’t imagine not smoking, but the one thing I really hate about smoking is. . .”
- Listener’s task is to respond ONLY with reflective statements—try to complexify reflections and try to evoke some change talk
- Speaker responds to listener by continuing to elaborate
- Stay in your role. Do not discuss or break role until I tell you to switch.
- Switch and repeat exercise
Stage of Preparation

They are ready to quit smoking

Counseling approach: directness, clarity, specific suggestions, Help them obtain the NRT’s, Use approval, Offer them praise and encouragement, provide strategies for smoke cessation like groups, quit now line
Ask questions like: What problems do you anticipate?
Encourage use of a tool like pack tracks to monitor how much they smoke.
Objective: Client will develop a quit plan by 00/00/0000.

Intervention: CSS will encourage client to schedule an appointment with PCP and offer communication support in PCP appointment to discuss NRT use. CSS will educate client and encourage use of FFS groups offered at Crider Health Center Quarterly. CSS will educate and encourage use of 1-800-QUITNOW hotline. CSS will encourage client to schedule an appointment with NCM to create a quit plan. CSS will facilitate discussion and assess for change talk weekly regarding smoking cessation.

Responsible person(s): Client, CSS, NCM
Frequency: 2x monthly
Duration: 3 months
Baseline: Client has never developed a quit plan before
Start date 00/00/0000
The Stage of Action

You may hear: I don’t smoke anymore.

Counseling approach: Help to identify relapse triggers, provide support even if they have a slip but don’t return to smoking as much as they had. Provide encouragement and watch for depression. Encourage peer support lines such as 1-800-quit now line or nicotine anonymous or FFS groups.

Help eliminate relapse triggers and adapt new coping skills.

Teach all the lifestyle changes to aid in success.
PDP Objective at this Stage of Change

- **Objective:** Client will attend all 8 FFS groups and quit smoking 00/00/0000.

- **Intervention:** CSS will support client to problem solve barriers to attending FFS groups. CSS will encourage client to utilize NCM, CSS, and 1-800-QUITNOW hotline when client needs to problem solve barriers to smoking cessation. CSS will facilitate discussion and assess change talk regarding smoking cessation weekly.

- Responsible person(s): Client, CSS, NCM
- Frequency: Weekly
- Duration: 7 weeks
- Baseline: Client has enrolled in FFS group
- Start date 00/00/0000
**Nicotine Withdrawal**

- Irritability/frustration/anger
- Anxiety
- Difficulty concentrating
- Restlessness/impatience
- Depressed mood/depression
- Insomnia
- Impaired performance
- Increased appetite/weight gain
- Cravings peak first few days & can last weeks
Maintenance

You may hear: I am a non-smoker now

Counseling approach: Praise, reassurance, provide support and identify relapse potentials and plan to how to avoid them

The Client is open to information and feels a sense of success and self-righteousness even if they still have occasional cravings

The goal at this stage is to help the Client discover the truth about their life while promoting emotional growth
PDP Objective at this Stage of Change

- **Objective:** Client will abstain from use of tobacco for the next 12 months.

- **Intervention:** CSS will facilitate discussion with client quarterly regarding the benefits of abstaining from tobacco use. CSS will offer education and resources regarding the health benefits of continued abstinence from tobacco use. CSS will encourage client to utilize NCM, CSS, and 1-800-QUITNOW hotline when client needs to problem solve concerns regarding abstinence from tobacco use.

- **Responsible person(s):** Client, CSS, NCM
- **Frequency:** Quarterly
- **Duration:** 12 months
- **Baseline:** Client has been abstinent from tobacco since 00/00/0000
- **Start date:** 00/00/0000
JANE

- Seeking treatment for Major Depressive Disorder as well as crack cocaine use
- Smokes 2 packs of cigarettes per day
- “Sure I have some bad health stuff due to my smoking, who wouldn’t? But I don’t want to stop smoking cigarettes right now; I’m already trying to stop smoking crack. That’s too much at one time.”
- What stage of change in Jane in?
Jane meets consistently with CSS, who identifies and response to increased change talk.

Jane reports, “Maybe I need to cut down on my cigarette smoking because I have a family history of Cancer and COPD and I have some breathing problems.”
Jane-Group Activity

- In groups of 4, identify 2 stage matched goals and interventions that you might use with Jane. Share your favorite one with the larger group.
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)
- Up to 30% success rate for patients who complete sessions

Most health-care providers, and most patients, are not familiar with tobacco quitlines.
WHEN A PATIENT CALLS THE QUITLINE

- Counselor or Intake Specialist Answers
  - Caller is routed to language-appropriate staff
- Brief Questionnaire
  - Contact and demographic information
  - Smoking behavior (e.g., cigarettes per day)
  - Choice of services
When a patient calls the quitline (cont’d)

- Services provided
  - Referral to local programs
  - Quitting literature mailed within 24 hrs
  - Individualized telephone counseling
    - Confidential
    - Professional, trained counselors

Quitlines have broad reach and are recommended as an effective strategy in the 2008 Clinical Practice
MAKE a COMMITMENT...

ADDRESS TOBACCO USE
WITH ALL PATIENTS.

AT A MINIMUM,
MAKE A COMMITMENT TO INCORPORATE BRIEF TOBACCO INTERVENTIONS AS PART OF ROUTINE PATIENT CARE.

ASK, ADVISE, AND REFER.
Any Questions?