Helping Smokers Quit: California

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From Guideline to Practice: A Nursing Intervention for Helping Smokers Quit
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Developed in collaboration with Rx for Change: Clinician-Assisted Tobacco Cessation
HELPING SMOKERS QUIT: The HSQ Project

GOALS

- Provide nurses the **knowledge and skills** to deliver evidence-based smoking cessation interventions to patients who smoke
- Correct **myths and misperceptions** about tobacco cessation
- Disseminate **resources** via the web:
  - www.tobaccofreenurses.org &
  - www.helpingsmokersquit.org
CHANGING WHAT A "GOOD NURSE" DOES
SMOKING: The LEADING CAUSE of PREVENTABLE DEATH in THE UNITED STATES

ANNUAL U.S. DEATHS ATTRIBUTABLE TO SMOKING, 1997–2001

<table>
<thead>
<tr>
<th>Cause</th>
<th>Deaths</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular diseases</td>
<td>137,979</td>
<td>32%</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>123,836</td>
<td>28%</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>101,454</td>
<td>23%</td>
</tr>
<tr>
<td>Second-hand smoke*</td>
<td>38,112</td>
<td>9%</td>
</tr>
<tr>
<td>Cancers other than lung</td>
<td>34,693</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>1,828</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

* In 2005, it was estimated that nearly 50,000 persons died due to second-hand smoke exposure.

United States: 437,902 deaths annually
California: 37,800 deaths annually


Trends in cigarette current smoking among persons aged 18 or older

- Male: 20.8% of adults are current smokers
- Female: 23.9% in 1955, 18.0% in 2003

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.
Overall smoking rate 14.3%, 2nd lowest in U.S.

SMOKING PREVALENCE IN CALIFORNIA, BY GENDER

KEY ISSUES: CALIFORNIA

- Ethnic/Racial differences: 15.4% Whites, 5% of African Americans, 25.2% of American Indians, 12.4% of Asian/Pacific Islanders
- Smoking during pregnancy
  - 9%, lowest in the U.S.
- Smoking among 18–24 year olds
  - 18.6%
- Adolescent Smoking:
  - 15.4%
- Tobacco-related health care costs
  - $9.1+ billion per year

- **Smoke-free workplace laws**
  - Over 95% protected from secondhand smoke in workplaces, public places, restaurants, and bars

- **Cigarette taxes**
  - $0.87 per pack (US median = $1.18/pack).
  - Ranked 30th in the US (2007)

- **Tobacco industry spending**
  - $843.8 million spent by tobacco companies per year
  - Single-largest domestic market for cigarette sales (3,850,000 smokers in the state)

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**COMPOUNDS in TOBACCO SMOKE**

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

<table>
<thead>
<tr>
<th><strong>Gases</strong></th>
<th><strong>Particles</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>Nicotine</td>
</tr>
<tr>
<td>Hydrogen cyanide</td>
<td>Nitrosamines</td>
</tr>
<tr>
<td>Ammonia</td>
<td>Lead</td>
</tr>
<tr>
<td>Benzene</td>
<td>Cadmium</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>Polonium-210</td>
</tr>
</tbody>
</table>

Nicotine does NOT cause the ill health effects of tobacco use.
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

- 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

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

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

There is no safe level of exposure to second-hand smoke.

- Second-hand smoke causes premature death and disease in all nonsmokers
- Children:
  - Increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma
  - Respiratory symptoms and slowed lung growth if parents smoke
- Adults:
  - Immediate adverse effects on cardiovascular system
  - Increased risk for coronary heart disease and lung cancer
- Millions of Americans are exposed to smoke in their homes/workplaces
- Indoor spaces: eliminating smoking fully protects nonsmokers
  - Separating smoking areas, cleaning the air, and ventilation are not effective

FINANCIAL IMPACT of SMOKING:
COSTS to the INDIVIDUAL

Buying cigarettes every day for 50 years @ $4.12 per pack
Money banked monthly, earning 1.5% interest

Packs per day

$331,467

$220,978

$110,489

Hundreds of thousands of dollars lost
SMOKING CESSATION: REDUCED RISK of DEATH

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

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

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

**QUITTING: HEALTH BENEFITS**

- **2 weeks to 3 months**
  - Circulation improves, walking becomes easier
  - Lung function increases up to 30%
  - 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

- **1 to 9 months**
  - Ability to clear lungs of mucus increases
  - Coughing, fatigue, shortness of breath decrease
  - Risk of stroke is reduced to that of people who have never smoked

- **1 year**
  - Lung cilia regain normal function

- **5 years**
  - Risk of CHD is similar to that of people who have never smoked

- **10 years**
  - Reduced excess risk of CHD

- **15 years**
  - Risk of CHD is similar to that of people who have never smoked
TOBACCO DEPENDENCE:
A 2-PART PROBLEM

Tobacco Dependence

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

**Behavioral**
- The habit of using tobacco
- Behavior change program

Treatment should address the physiological and the behavioral aspects of dependence.
Nicotine reaches the brain within 11 seconds.

Nicotine addiction is *not* just a bad habit. Discontinuation leads to withdrawal symptoms.

**Nicotine**
- Stimulates dopamine release
- Pleasurable feelings
- Repeat administration
- Tolerance develops
Tobacco users maintain a minimum serum nicotine concentration in order to:
- Prevent withdrawal symptoms
- Maintain pleasure/arousal
- Modulate mood

Users self-titrate nicotine intake by:
- Smoking/dipping more frequently
- Smoking more intensely
- Obstructing vents on low-nicotine brand cigarettes
NICOTINE WITHDRAWAL EFFECTS

- Depression
- Insomnia
- Irritability/frustration/anger
- Anxiety
- Difficulty concentrating
- Restlessness
- Increased appetite/weight gain
- Decreased heart rate
- Cravings*

Most symptoms subside within 2–4 weeks.

* Not considered a withdrawal symptom by DSM-IV criteria.

“Numerous effective medications are available for tobacco dependence, and clinicians should encourage their use by all patients attempting to quit smoking—except when medically contraindicated or with specific populations* for which there is insufficient evidence of effectiveness.”

* Includes pregnant women, smokeless tobacco users, light smokers, and adolescents.

FDA-APPROVED MEDICATIONS for CESSATION

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

**Nicotine lozenge**
- Commit (OTC)
- Generic nicotine lozenge (OTC)

**Nicotine transdermal patch**
- Nicoderm CQ (OTC)
- Generic nicotine patches (OTC, Rx)

**Nicotine nasal spray**
- Nicotrol NS (Rx)

**Nicotine inhaler**
- Nicotrol (Rx)

**Bupropion SR**
- Zyban (Rx)
- Generic bupropion SR (Rx)

**Varenicline**
- Chantix (Rx)

These are the only medications that are FDA-approved for smoking cessation.
NICOTINE REPLACEMENT THERAPY: RATIONALE for USE

- Reduces physical withdrawal from nicotine
- 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
Nicotine levels for various nicotine-containing products

- Cigarette
- Moist snuff
- Nasal spray
- Inhaler
- Lozenge (2mg)
- Gum (2mg)
- Patch

Time (minutes):

0 10 20 30 40 50 60

Plasma nicotine (mcg/l):

0 5 10 15 20 25
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.
Compared to smokers who receive no assistance from a clinician, smokers who receive such assistance are 1.7–2.2 times as likely to quit successfully for 5 or more months.

<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 (0.9,1.3)</td>
</tr>
<tr>
<td>Self-help material</td>
<td>1.1 (1.3,2.1)</td>
</tr>
<tr>
<td>Nonphysician clinician</td>
<td>2.2 (1.5,3.2)</td>
</tr>
<tr>
<td>Physician clinician</td>
<td></td>
</tr>
</tbody>
</table>

$n = 29$ studies

NURSES CAN MAKE a DIFFERENCE

Nursing intervention for smoking cessation vs. usual care

$n = 31$ studies; $15,205$ participants

Compared to smokers who receive usual care, smokers who receive assistance from a nurse have a $28\%$ greater probability of successfully quitting for $5$ or more months.

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

  “Quitting is important, and I can refer you to people who can help you.”

  “There are several medications that can help you to quit. I’d be happy to ask the [doctor, nurse, pharmacist, etc.] to talk with you about these options.”

  “People who receive assistance with quitting are more likely to be able to quit successfully. If you are interested, we can talk about different options.”
STEP 3: ASSESS

- **ASSESS readiness to quit**
  - Ask every tobacco user if s/he is willing to quit at this time.
  - If willing to quit, provide resources and assistance
    - See STEP 4, ASSIST
  - If NOT willing to quit at this time, provide resources and enhance motivation. Ask three questions:
    - “Do you ever plan to quit?” [If yes, continue with...]  
    - “How will it benefit you to quit later, as opposed to now?”
    - “What is the worst thing that could happen if you were to quit tomorrow?”
STEP 4: ASSIST

ASSIST tobacco users with a quit plan

- Set a quit date, ideally within 2 weeks.
- Get support from family, friends, and coworkers.
- Review past quit attempts—what helped, what led to relapse.
- Anticipate challenges, particularly during the critical first few weeks, including nicotine withdrawal.
- Identify reasons for quitting and benefits of quitting.
- Give advice on successful quitting:
  - Complete abstinence is essential—*not even a single puff*.
  - Drinking alcohol is strongly associated with relapse.
  - Having other smokers in the household hinders successful quitting.
STEP 4: ASSIST (cont’d)

- **ASSIST** tobacco users with a quit plan
  - Encourage use of pharmacotherapy when not contraindicated
  - Provide resources:
    - Toll-free telephone quitline
      - National: 1-800-QUIT NOW
      - California: 1-800-NO-BUTTS
    - Web sites for free materials:
      - Agency for Healthcare Research and Quality
        www.ahrq.gov/path/tobacco.htm
      - Tobacco Free Nurses: www.tobaccofreenurses.org
    - Cessation materials appropriate by age, culture, language, education, and pregnancy status
STEP 5: ARRANGE

- **ARRANGE** follow up visits
  - Provide information for follow up visits with his/her health care provider
  - If a relapse occurs, encourage repeat quit attempt—tell patient that relapse is part of the quitting process.
    - Review circumstances that caused relapse.
    - Use relapse as part of the learning experience.
    - Reassess pharmacotherapy use and plans for termination.
  - Refer to other resources
REFER tobacco users to other resources

Referral options:
- Hospital-based cessation service (if available)
- A local group program
- The support program provided free with each smoking cessation medication
- Web-based program (e.g., www.quitnet.com)
- Toll-free national telephone quitline: **1-800-QUIT-NOW**
Referring patients to a toll-free quitline is simple and easily integrated into routine patient care.

- **Quitlines** are effective and provided at no cost to the caller
- **Quitline** callers receive one-on-one coaching and follow-up from trained counselors
- **Smokers receiving telephone counseling** are more likely to quit than those who only use self-help materials

- **Callers to 1-800-NO-BUTTS** may receive:
  - Initial counseling (approximately 40 min) focused on preparing to quit; printed materials mailed to caller.
  - Follow-up calls (10-15 min) delivered at relapse-sensitive times focused on relapse prevention.
  - Clients may call for advice or encouragement as needed.
RESOURCES:
Calif ornia

- **California Smokers’ Quitline**
  - www.californiasmokershelpline.org
  - 1-800-NO-BUTTS (M-Fri, 7am-9pm, Sat 9am-1pm, voicemail available 24 hours/day)

- **California’s Tobacco Control Program (CTCP)**
  - http://www.cdpH.ca.gov/programs/Tobacco/Pages/default.aspx

- **TobaccoFreeCA.com**
  - http://www.tobaccofreeca.com/

- **Tobacco Free Nurses**
  - www.tobaccofreenurses.org
  - www.helpingsmokersquit.org
    - **Username/Password:** hsq/hsq
Why Should California Nurses Address Tobacco?

- Helping your patients to quit is the most important thing you can do to protect their health now and in the future.
- If each of the 435,000 nurses in California helped four smokers per year to quit, we could reach 1.7 million, 45%, of the 3,850,000 smokers in the state!
- You can make a big difference in your patients’ lives!
Helping Smokers Quit: Helping Smokers Quit: Helping Smokers Quit:
A Guide for Clinicians

National Quitline
1-800-QUIT NOW

U.S. Department of Health and Human Services
Public Health Service
Revised May 2009

Even brief tobacco dependence treatment is effective and should be offered to every patient who uses tobacco.

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

Ask about tobacco use at every visit.

Implement a system in your clinic that ensures that tobacco-use status is obtained and recorded at every patient visit.
Any questions or comments?