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Promoting Nonsmoking: A Central Part of Primary Care

Devin Sawyer, MD, SPFM, 1-30-06
Epidemiology

Worldwide:

• 500 million of those alive today will be killed by tobacco
• 5 million premature deaths worldwide in 2000

In the US:

• 442,398 deaths annually
• 1 in every 7 or 8 deaths
• Cancer of Lung, Trachea, Bronchus =124,813
• Cardiovascular Disease =148,605
In the US health consequences and productivity losses associated with smoking are estimated to cost in excess of $90 billion every year.

Adolescents:
- 57% try smoking at least once by 12th grade
- Almost everyone who smokes as an adult started by 18
- The earlier a person begins the more likely they continue
- Within a year of smoking initiation, children inhale the same amount of nicotine per cigarette as adults, and experience the craving and withdrawal symptoms
Prevalence of Smoking among US Adults by Education (< 12\textsuperscript{th}, ≥ 16\textsuperscript{th}), 1966 – 2001

Lack of Awareness of Risk

• Among auto accidents, HIV, homicide, air pollution, and smoking
  – only 22% of adults rated smoking as #1 cause of death
  – only 17% among smokers
  (American Lung Assoc, Gallup Org, 1992)

• Among adults with diabetes
  – “I have diabetes, I don’t have to worry about cancer”
  – “Smoking helps keep my weight down”
  – But smoking increases risk of CVD, most likely cause of death among those with diabetes
  – Providers advise against smoking less often the more diseases a person has

So why do people smoke?

**POLITICALLY CORRECT**

I'm suing the tobacco companies because I smoked for years and got lung cancer!

No kidding! I'm suing the masonry companies because I repeatedly hit myself in the head with a brick and got brain damage!

By Jim Huber
Smoking is Simple

- Hand
- Mouth
- Inhale constituents
- x 20+ years
- Disease and Death
Smoking is Sexy!
Smoking is Rugged
Smoking is Stupid
Smoking is Complex

• Genetics
• Psychophysiology of nicotine metabolism
• Personality and affect
• Social influences – peers, families, communities
• Economic influences
• Organizational influences
• Legal influences
• Marketing -- Economics of Smoking -- International Trade
Smoking is a learned behavior
Conditioning of Smoking

- Reinforcing Effects
  - Euphoriant -- mood elevating
  - Anxiolytic -- anxiety reducing
  - Stimulant
- Rapid delivery
  - 7 sec mouth to CNS
- Rapid clearance
- Thus, subtle titration
- Over 1 million conditioning trials in 20-year Hx
  7 puffs x 20 cigs x 365 days x 20 yrs = 1,022,000
Addiction & Conditioning Aggravate Each Other

Strength of Nicotine  
→  Stronger Links to Situations

Variety, Number, Emotional Nature of Situations  
→  Stronger Addiction to Nicotine
Smoking and Distress

- More common among those who are depressed
- Quitting less likely among those who are depressed
- For sex and marital status, prevalence highest among divorced/separated men: 48.2% (Surg Gen Rept 1988)
  - Parallel to alcoholism, suicide
- Mental health outpatients (Hughes et al 1986):
  - 88% among schizophrenics
  - 49% among depressed
- 76% of male users of “soup kitchen” (McDade & Keil, 1988)
So how do we help this guy?
What we have learned from *Behavior Change and Self-Management* literature…

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<td>Smoking as a vital sign- ask at every visit, “The Haughton form”</td>
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<td>2) Collaborative Goal-Setting</td>
<td>“5 A’s” (Assess, Advise, Agree, Assist, Arrange), FRAMES, BBSWAR, The Action Plan</td>
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<td>3) Skills for quitting and staying quit</td>
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<td>Support lines, more contact with office, support groups, group visits</td>
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<td>Understanding of importance by family, friends Clean indoor air regulations, Comm. Approach Media Attention</td>
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<td>6) Continuity of Quality Clinical Care</td>
<td>Rx for Zyban®, Nicotine replacement Follow up and referral</td>
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Individualized Assessment

Y'know, I'm starting to think that smoking is bad for me...

RSSM- 1
Smoking as A Vital Sign…

Find out Smoking Status

Never smoked (less than 100 in lifetime)

Ex-smoker (PRAISE! and remember)
  ___ More than 2 years
  ___ Less than 2 years

If they Smoke (this is your set up)
  ___ Planning to quit in next month
  ___ May quit in next 6 months
  ___ No plan to quit

Use the Haughton form…
Collaborative Goal-Setting

**Off the Mark**

*Our kids are getting too big, too fast... it's time for me to step in and slow down their growth...*

*At Home with Alan Greenspan*
<table>
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<td>1. Assess</td>
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<td>5. Arrange</td>
<td>Self-Efficacy</td>
<td>Action Plan</td>
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An individualized *assessment* that leads to an *action plan* that you help them with that they *believe* they can do
Assess Smoking

- Understanding of risks of smoking
- Check: Understand enormity of risk???
- Smoking patterns of family, friends
- Previous and planned quit attempts

- The *Haughton* form makes this process more efficient…
Advise to Quit, Non-directive

• Precontemplation – Not thinking about quitting (non-directive)
  – Quitting is THE MOST important thing can do to protect health
  – Be Low-key re: risks
  – Promise of help

• Contemplation – Maybe in next 6 months (still non-directive)
  – Pros (not Cons)
  – Emphasize doable
  – Overview of quitting
Advise to Quit, *Non-directive*

Tailor advice to:

- Importance of quitting to patient (why?)
- Previous answers
  - If underestimate risk: enormity of risk
  - If pessimistic: avg. quitter relapses 2 - 4 times, thus, “you can too”

Current symptoms
- Lifespan phase (e.g., new parents)
- Cost of NRT or Zyban
The patient who is ready for action
-OK to be DIRECTIVE-

- Emphasize that it is doable
- Overview specifics of an Action Plan:
  Step #1 — Set Quit Date
  Step #2 — Using Medications
  Step #3 — Staying Smoke Free
    Plan for dealing with temptations
    Recruit support and encouragement (family, friends)
  Step #4 — Rehearse response to lapse, document, and remember what the plan was
- Remember the average successful quitter made 2 to 4 previous attempts at quitting
Skills

• Setting Quit Date – Individualized
• Coping with Temptations – Key is *specific* plans made *ahead of time* (effective problem solving skills begin with anticipation)
• Relapse prevention
  – Keeping lapses from becoming relapses
  – Avoiding lapses from premature sense of success
• Media Choices
  – Self help (video, web based, self-help manuals)
  – Groups – Freedom from Smoking®
  – Tobacco Quit Line: 877-270-STOP (Wa.St.DOH)
  – 800 – 4 – CANCER for self-help materials
  – ADA – materials for smokers with diabetes
Follow Up and Support

off the mark

www.offthemark.com

by Mark Parisi

SMOKED HAM

CURED HAM

RSSM- 4
Arrange Follow-Up

- Evidence shows this is important but we don’t do it well
- Frequency and duration of contact correlates with improved outcomes (sustained beh. change)
- Doesn’t matter who - Physician, staff member, volunteer, Promotora, CHW, other patients, support groups
- Phone, face-to-face, e-mail, web
- Timing
  - 24 - 48 hours post quit
  - 7 - 14 days
  - Ongoing PRN
- Review action plan, praise, adjust
- St Peter Hospital Stop Smoking Support Group
  - (360) 357-5297
Community Resources

RSSM-5
• Individuals are more likely to quit if norms in community support quitting (ex- PROP 901)

• Advertisements, TV/movies-stimulate the quitters’ associations with smoking (ex-stressed docs- Abby on ER, Becker, *The Last Holiday*)

• Ongoing support from family and friends is more likely in a community that understands importance of not smoking (ex-North St Louis)
Neighbors for a Smoke Free North Side

Neighborhood and Peer-Based Promotion of Nonsmoking

24-month program

Run through Grace Hill agency

Steering Committees in each Neighborhood

Diverse activities: mass media, door-to-door, self-help manual, billboards

Local development of materials- e.g., local revision of ALA brochure featuring neighborhood residents and their quotations, billboards with pictures
Neighbors for a Smoke Free North Side

Evaluation by random-digit surveys in
- Kansas City Comparison Neighborhoods
- St. Louis Intervention Neighborhoods
- St. Louis < $20,000 Annual Income

Fisher et al.  
Continuity of Quality Clinical Care
NICOTINE REPLACEMENT

• Gum produces blood levels at 40%
• 21mg patch gives levels of 40-50%
• Ad Lib use of inhaler gives level of 30-35%
• Gum and inhaler give some control over titration of dose
• Inhaler can cause bronchospasm
NICOTINE REPLACEMENT - Does it work?

• Study 1:
  – 305 pts in 10 wk beh. program given patch or placebo patch-
  – At 3 years the quit rates were…
    • 13.8% with patch smoke free
    • 5.2% with placebo smoke free
Nicotine: What dose?

- Study 2
  - 724 smokers randomized to 21, 14, 7mg patches or placebo for 10 weeks
  - Confirmed quit rates at 48 to 62 months:
    - 21 mg patch = 12.4%
    - 14 mg patch = 5.5%
    - 7 mg patch = 4.7%
    - Placebo = 4.5%
Nicotine: Summary

- Helpful as adjuvant to behavioral approach (i.e.-in the activated patient). Doubles success rate
- Use full-dose patch
- May use gum or inhaler if patient believes it will help (self-titration makes sense)
- Ideal if used for 4 to 6 weeks with 2 to 4 week taper.
- Longer treatment periods have not improved quit rates
- Unfortunately studies suggest <50% of those who remain smoke free at 1 year are smoke free at 8 years
However, those who are smoke free at 8 years have tried 4 times previously with relapse.
Bupropion (Zyban)

• Study 3
  – 615 patients randomized to bupropion SR 150mg BID vs placebo

At 7 weeks:
  44% with bupropion
  19% on placebo

After one year:
  23% bupropion
  12% placebo
Dose and duration of Zyban: Does it matter?

• Study 4
  – 1500 patients treated with 150mg or 300mg XL daily, or placebo for 8 weeks
  – No difference with quit rates at 1 year
  – More SA’s with higher dose (insomnia, poor concentration, tremor, GI upset)

• Study 5
  – 700 treated for a) 7 weeks or b) 1 year
  – At 1 year a) 42% vs b) 51% quit rate
  – Median time to relapse after d/c- a) 65 vs b) 156 days
  – At 2 years quit rates were the same (a-40% & b-41%)
**Zyban and Nicotine: Better together?**

**Study 6**

- 893 randomized to:

  1) Placebo
  2) Bupropion - 150mg BID for 2 mths
  3) Nicotine - 6 wks @ 21mg with 2 wk taper
  4) Both 2 & 3

At 12 months, % smoke free:

1) Placebo - 15%
2) Bupropion - 30%
3) Nicotine - 16%
4) Both 2 & 3 - 35%
Other options?  
Hope for the future?

• Acupuncture and hypnosis
  – 2002 Cochrane review assessed 22 studies and found no “significant benefit”

• New drugs:
  – Rimonabant, CB1 selective cannabinoid receptor antagonist – phase III trials underway for smoking and obesity
  – NicVAX, a conjugated vaccine that generates anti-nicotine Abs to inhibit nicotine centrally, is in phase II trials
A few words about Smoking and Pregnancy

• The most important modifiable risk factor associated with adverse pregnancy outcomes
• Associated with SAb, placental abruption, PPROM, placenta previa, preterm labor and delivery, and low birth weight
• In populations of women with a high prevalence of smoking, it is estimated that cessation during pregnancy could prevent
  – 10% of perinatal death
  – 35% of low birth-weight births
  – 15% of preterm deliveries
Prevalence in Pregnancy…

• CDC reports decline from 19.5% to 11% from 1989 to 2003, 15% for teens

• However, Univ. of Alabama study showed;
  – 25% screened positive
  – 24% of those who screened negative tested positive for nicotine
  – 50% of those when re-questioned stated they “just quit” when they found out they were pregnant
So who quits?

- Study in Sweden showed 30% quit during pregnancy (a concrete and immediate reason to quit)
  - 18% before or just after first visit
  - 7% by 24 weeks
  - 4% by 3rd trimester
- Risk factors for continued smoking:
  - DSHS
  - Partner who smokes
  - 10 or more per day
  - <12th grade education
  - Coexisting depression
The Clinical Practice Guidelines (USDHHS) have made 3 recommendations for pregnant women that smoke:

A level evidence:

1) augmented psychosocial interventions that exceed minimal advice

   • 5 to 15 minute intervention with written quit material yielded 16.8% quit rate verses 6.6% for 3 minutes of advise or less
USDHHS-
*B level recommendation:*

2) Offer cessation interventions at every visit
   • Although most quit early there is still enough evidence that it should be discussed at most or every visit
3) Pharmacotherapy should be considered when a pregnant woman is otherwise unable to quit, and when the likelihood of quitting, with its potential benefits, outweighs the risks of the pharmacotherapy and potential continued smoking

- Agency of Health Care Policy and Research advocate the use of adjunct pharmacotherapy for all smokers unless contraindicated and state “these therapies remain underutilized, particularly in pregnant patients, due to concern over the potential for adverse fetal effects”

- ACOG advocates targeting pregnant women “only when non-pharmacologic treatments have failed”
After pregnancy…

- 90% relapse within first year
- Stress, poor coping skills, smoking partner, depression/”blues” are associated with relapse
- No effective strategies to prevent relapse (most who quit see it as temporary)
- Start over…
10 packs of Carlton have less tar than 1 pack of these brands.

Carlton is lowest.

Good Night, Johnny
As the curtain closes on TV's greatest career, we remember the best of Carson

A Cure for Cancer?
The real story behind Taxol, the 'miracle drug' from the yew tree