Quitting Tobacco: Helping Our Own

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Objectives

• Describe the human toll of nicotine and tobacco use
• Identify the costs employers pay for employees who use tobacco
• Identify the basic components of tobacco use
• Identify components of a best practices tobacco treatment program
Tobacco Use

• U.S. smoking rate – 19.8%¹
  – Men – 22.3%
  – Women – 17.4%

• Michigan smoking rate – 21.1%¹
  – Men – 23.4%
  – Women – 19.0%

• Pregnant Females – 15.1%
“Cigarette smoking results in 5.5 million years of potential life lost in the United States annually”

Centers for Disease Control and Prevention, 2007
About 443,000 U.S. Deaths Attributable Each Year to Cigarette Smoking*

- Lung Cancer, 128,900
- Ischemic Heart Disease, 126,000
- Chronic Obstructive Pulmonary Disease, 92,900
- Other Diagnoses, 44,000
- Other Cancers, 35,300
- Stroke, 15,900

*Average annual number of deaths, 2000-2004. Source MMWR 2008, 57 (45): 12226-12228
Annual Tobacco Toll - U. S.

• For every person who dies from a tobacco related illness – 20 more suffer from at least one tobacco-related illness (approx. 8.6 million)

• 6,000,000+ children alive today who will ultimately die from a smoking related disease (at current rates)\(^1\)
Annual Tobacco Toll - Michigan

- 14,500 Michigan residents who die from their own smoking
- 1,740 adults who die from ETS exposure
- 10,700 Michigan kids who have lost at least one parent to smoking related death
- 298,000 Michigan youth alive today who will ultimately die from smoking (at current rates)
The U. S. Financial Burden of Smoking

• $96 billion in public and private health care expenditures
• $4.98 billion in health care expenditures from ETS exposure
• $97 billion in productivity losses*
• $2.6 billion SS Survivors insurance for more than 300,000 kids who have lost at least 1 parent due to smoking

*Productive work lives shortened by smoking-caused death. Does not include cost from smoking-caused disability during work lives, smoking caused sick days, or smoking-caused productivity declines on the job. Campaign for Tobacco-Free Kids, 2008
Annual Michigan Financial Burden

- $3.4 billion in health care expenditures ($4.93/pack)
- $175.5 million in health care expenditures from ETS exposure
  - State Medicaid $1.1 billion ($1.63/pack)
- $3.8 billion in productivity losses ($5.50/pack)
- $2.6 billion in SS Survivors insurance for more than 300,000 kids who have lost at least 1 parent due to smoking\(^1\)
Costs to the Workplace

- Total economic costs associated with smoking are approximately $7.18 per pack sold in US$²
- Absenteeism – smokers are absent 50% more often than nonsmokers ≈ 5.5 days/yr or $330/yr
- Insurance – Additional health-care cost per smoker over $300 per year. Smokers can cost an extra $45 per yr in accidental injury and related worker’s compensation
Additional Costs to the Workplace

• Smokers have a 50% greater chance of hospitalization than nonsmokers
• Fire damage caused by smoking can be $10 per year per smoker. Insurance premiums can be 25% to 35% lower for smoke-free businesses.
• Up to 2/3 of early retirees are smokers, although they comprise less than 30% of the work force
• Employers could save the equivalent of $3.00 in smoking related medical costs for every $1 spent in treatment
Costs to the Workplace cont.

Total Excess Cost per Smoker per Year

= $5,606
Self Check Mini Quiz

True or False

1. The financial burden from smoking is over $100 billion dollars.
2. For every $1.00 spent by employers in treatment, they save $2.00 in medical cost.
Self Check Mini Quiz

1. True – The direct cost for healthcare is $96 billion plus another $97 billion in lost productivity

2. False – For every $1 spent in treatment, employers save approximately $3.00 in medical expenses
How many employees smoke?

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Workers</td>
<td>38.8%</td>
</tr>
<tr>
<td>Cleaning/bld service</td>
<td>29.6%</td>
</tr>
<tr>
<td>Health service</td>
<td>29.3%</td>
</tr>
<tr>
<td>Health technologist/tech.</td>
<td>22.2%</td>
</tr>
<tr>
<td>Clerical</td>
<td>19.5%</td>
</tr>
<tr>
<td>Management related</td>
<td>18.4%</td>
</tr>
<tr>
<td>Health diagnosing</td>
<td>5.0%</td>
</tr>
<tr>
<td>Nursing -</td>
<td>8.4%</td>
</tr>
</tbody>
</table>
Productivity

- Productivity – Approximately 18.2 days per year lost to smoking rituals
  - Not only time but inefficiency and errors caused by higher CO levels, eye irritations, and lower attentiveness
Productivity Example

In a hospital with 500 employees with MI smoking rate of 21.1% -- 106 smokers

• Generally a smoker takes about four smoke breaks per day, each break for approximately 10 minutes
  – 40 minutes/employee
  – 4240 minutes/day
  – Equivalent of a functional loss of 8.8 FTEs per day
Tobacco Use

Physical Addiction

Psychological Addiction

Social Factors
Effects of Neurotransmitters & Hormones Released by Nicotine

Dopamine $\Rightarrow$ Pleasure, Appetite Suppressor
Norepinephrine $\Rightarrow$ Arousal, Appetite Suppressor
Acetylcholine $\Rightarrow$ Arousal, Cognitive Enhancement
Vasopressin $\Rightarrow$ Memory Improvement
Serotonin $\Rightarrow$ Mood Modulation, Appetite Suppressor
Beta-Endorphin $\Rightarrow$ Reduction of Anxiety & Tension

The biology of nicotine dependence: from the 1988 Surgeon General's Report to the present and into the future. [Journal Article]

“Positive” Effects of Nicotine

• Stimulates memory and alertness
• Mood altering agent that tends to alleviate boredom and reduce stress
  – It can also reduce aggressive responses to stressful events
• Appetite suppressant, specifically for simple carbohydrates (sweets)
• Euphoric and mood enhancing effects
Psychological Addiction

• Tobacco use is a learned behavior
• Tobacco use is a triggered behavior
• Tobacco use is an automatic behavior
• Up to 55% smokers have an underlying depressive disorder
• Used to decrease anxiety and increase stimulation
Psychological Addiction (cont.)

Smokers are the experts of a behavior –

20 cigarettes X 10 puffs per cig = 200 puff/day

200 puffs X 365 days = 73,000 puffs/year

73,000 puffs/year X 20 years = 1,460,000 puffs

What have you done more than 1,460,000 times?
Social Factors

- Smokers know smokers
- Smoking is an important part of socializing, especially at work sites
- Many smokers started smoking because of social factors as adolescents. Those reasons often continue to be present in adulthood
Tobacco Treatment

• The average smoker has nine quit attempts before achieving abstinence
• Insurance coverage of tobacco treatment medications and counseling increases the use of treatment
• Treatment coverage increases both the use and the number of successful quit attempts
Tobacco Treatment cont.

• Sixty-six percent of Americans are insured through an employer, but only 24% of employers have coverage for tobacco treatment.
• Tobacco cessation is more cost effective than mammography, colon cancer screening, and pap tests.
• Tobacco cessation is more cost effective than the treatment of hypertension and high blood pressure due to cholesterol.
Tobacco Treatment: Cost Effective?

- Cost/expenditures for employee tobacco treatment programs equalize around three years.
- Benefits exceed costs by five years.
- Neonatal healthcare related to smoking equals approx. $704.
  - Research indicates that for every $1 spent on tobacco treatment for pregnant women, $6 are saved.
Tobacco Treatment \textit{cont.}

- Over time tobacco treatment benefits:
  - Reduce health care costs
  - Reduce absenteeism
  - Increase productivity
  - Reduce life insurance costs

- Smoke-free workplaces reap additional savings through reduced fire insurance cost, property repair, and upkeep
Tobacco treatment

- Seventy percent of smokers report they want to quit.
- Forty percent make at least one quit attempt a year.
- Less than 5% who attempt to quit are able to stay quit for 3-12 months.
- Quitting success rates increase when evidence-based interventions are employed.
Self Check Mini Quiz

1. What are the three aspects that make up tobacco use?
   a. Emotional, physical, and habitual
   b. Spiritual, behavioral, and cognitive
   c. Physical, psychological, and social

2. Tobacco cessation treatment is more cost effective than mammography screening, colon cancer screening, and pap tests.
   a. True  b. False

3. How many smokers report that they want to quit?
   a. 5%     b. 20%     c. 45%     d. 70%
Self Check Mini Quiz

1. C. Physical addition, psychological addiction, and social factors

2. True: Tobacco cessation treatment is also more cost effective than treatment for hypertension and high blood pressure due to cholesterol

3. 70% of smokers report that they want to quit, 44% make at least one attempt each year, but less than 5% who attempt to quit are able to stay quit for 3-12 months
Best Practices Treatment

- The Public Health Service recommends counseling and the use of pharmacotherapy for tobacco treatment.
- Behavioral counseling (group/individual) is more effective than self-help materials or receipt of educational materials.
- The effectiveness of counseling increases as time and duration increases up to 7-8 sessions & 90 minutes.
Best Practices Treatment cont.

• Smokers are more likely to use telephone counseling than group or individual counseling

• The use of medications at least doubles quit rates over “cold turkey” quit attempts
Employee needs

- Cognitive – Behavioral Intervention
- Pharmacological Interventions
- High level of motivation
- Exercise as part of the treatment process
First Line Medications

• First line medications:
  – Nicotine patch – OTC & Rx
  – Nicotine gum – OTC
  – Nicotine lozenge – OTC
  – Nicotine Inhaler – Rx
  – Nicotine Spray – Rx
  – Bupropion – Rx
  – Varenicline - Rx
Cognitive – Behavioral Interventions

• Change the way the person thinks about cigarettes/smoking
• Change the way the person behaves
• Replace “tobacco skills” with adaptive coping skills
• Relapse prevention strategies
How to Help Our Staff

• Cover at least four 30-minute counseling sessions – telephone, individual or group
• Cover both prescription and OTC medications
• Cover for combination therapies
• Cover for at least two quit attempts a year
• Eliminate or minimize co-pays/deductibles
How to Help Our Staff cont.

• Time for assistance
• Create a healthy culture
• Consider offering assistance to significant others and dependents
• Consider financial incentives for enrolling and completing treatment programs
  – Research finds a modest incentive can positively impact the number of people who complete programs
## Options to Support Employees who Smoke

<table>
<thead>
<tr>
<th>Letter of Support</th>
<th>Pros</th>
<th>Cons</th>
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</thead>
</table>
| **Comprehensive** | • May enhance health status of employees  
• May help contain health care costs  
• Allows employer to assess impact of smoking program  
• More likely to yield changes in smoking behavior  
• Demonstrates employer’s commitment to helping employees who smoke | • More expensive than other options  
• Requires a significant effort by the employer |
| **Facilitation** | • May enhance health status of employees  
• Takes advantage of existing resources  
• Does not require continuing effort or monitoring by employer | • Requires significant start-up effort  
• Health care providers may be unwilling to provide support |
| **Referral** | • Takes advantage of existing resources  
• Less expensive than comprehensive support  
• Easier to implement than comprehensive support or facilitation | • Less effect on smoking behavior and health care costs |

Tobacco Treatment Specialist

• Identify who is already doing the work
  – Cardiology, pulmonary
• Need flexible schedule to accommodate all shifts
• Get training for Motivational Interviewing, addiction, nicotine addiction, CBT
• TTS provide interventions
• Availability to be accessible
Making it Work

• Senior leadership endorsement and commitment for program
• Support for employees
• Effective communication plan
  – Make sure smokers know what is available
  – Remember the highest group of smokers may be those least likely to use/have access to electronic communication
Making it Work cont.

• Acknowledge quitting is difficult and can take time
  – Remember tobacco users “worked” to where they are now; it will take “practice” or “work” to become an ex-smoker

• Create an environment of support for staff working to quit

• Exercise patience
Implementing and Sustaining

- Steps for implementing
  - Identifying program for institution
    - In-house program vs. “canned” program
    - Cost versus no cost
    - Cessation is not a money maker but a money saver
  - Identifying professionals
  - Obtaining training for professionals
  - Logistics – materials, location, scheduling
  - Materials
Implementing and Sustaining (cont.)

• Educating clinicians – VERY IMPORTANT
  – Smokers tend to see their physicians more than non-smokers
  – Clinician buy in of program will produce a pipeline to fill outpatient program

• PR
• Get program going
  – Best PR - patients talking to clinicians

• Set a reasonable schedule
Implementing and Sustaining (cont.)

• Make outpatient cessation program a service – part of the medical services
  – Electronic notes
  – Referrals
  – Treatment algorithms

• Take steps to adapt to needs of institution, employees and community