Helping Maryland Smokers Beat Their Addiction: 
Health Insurance Benefits for Smoking Cessation 
House Bill 303 (2005)
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Introduction

Each year we learn more and more about the negative health effects of smoking, but tobacco use is still the leading cause of preventable death in this country. While there are as many ex-smokers as there are smokers, proving that people are quitting, 22% of adults in Maryland still smoke\textsuperscript{1} and it’s killing them. Estimates place the numbers of smokers who want to quit at 70-80%, but quit attempts are much lower than that, and successful attempts are even lower. One proven way of increasing the number of quit attempts and the success rates of those attempts is to provide tobacco cessation therapies. These therapies are far more effective when covered by health insurance plans. Thus, Maryland should join New Mexico in leading the nation to mandate health benefits for tobacco cessation.

I. Smoking Causes Damage, Often Fatal, to Every Organ in the Human Body

Statistically, smoking cigarettes is one of the most harmful things a person can do to his or her body. The toxins in cigarette smoke have a negative effect on every human organ. Some of the harmful effects were identified years ago, spurring the tobacco control movement, but new causal relationships between diseases and cigarette smoke are being discovered all the time. Since 1967, the Surgeon General has warned that there is a causal relationship between smoking and lung cancer.\textsuperscript{2} The first Surgeon General’s report on smoking, issued three years before that in 1964, recognized the causal link between smoking and chronic bronchitis.\textsuperscript{3} Since 1979, a causal relationship was

\textsuperscript{1} Campaign for Tobacco-Free Kids, http://www.tobaccofreekids.org/reports/settlements/TobaccoToll.php3?StateID=MD. It is further estimated that 54,900 high school students in Maryland smoke (19.3%) and 12,200 Maryland children become daily smokers each year. \textit{Id.}


\textsuperscript{3} \textit{Id.} at 3.
understood to exist between cigarette smoking and coronary heart disease.\textsuperscript{4} Since 1990, it has been generally understood that smoking is responsible for the decreasing health of a smoker’s lungs.\textsuperscript{5} Oral cancers and cancers of the esophagus were confirmed to be related to cigarette smoking in 1982.\textsuperscript{6} Furthermore, as of the latest report from the Surgeon General there is evidence sufficient to infer a causal link between smoking and many diseases and ailments that one might not intuitively connect to smoking.

There is evidence sufficient to infer a causal relationship between smoking and:

- pancreatic cancer
- bladder and kidney cancers
- cervical cancer
- endometrial cancer (in postmenopausal women)
- gastric cancers
- acute myeloid leukemia
- low bone density (in postmenopausal women)
- hip fractures
- periodontitis
- reduced fertility in women
- nuclear cataract.

Furthermore, in maternal women there is sufficient evidence to infer a causal relationship between smoking and low birth weight, preterm delivery, and shortened gestation. There is sufficient evidence to infer a causal relationship between smoking during and after pregnancy and sudden infant death syndrome. Finally, there is sufficient evidence to suggest a causal relationship between smoking and colorectal cancer, oral clefts (in a child when the mother smokes during the pregnancy), low bone density in men, root-surface caries, and erectile dysfunction.\textsuperscript{7}

\textsuperscript{4} \textit{Id.} at 3.
\textsuperscript{5} \textit{Id.} at 4.
\textsuperscript{6} \textit{Id.} at 2.
\textsuperscript{7} \textit{See generally Executive Summary.}
Cigarette smoking accounts for 1 out of every 5 deaths each year in the United States, making tobacco use the leading preventable cause of death over HIV, motor vehicle accidents, alcohol use, illegal drug use, murders, and suicides combined. Smokers have a lower recovery rate and a higher complication rate in major surgery; they go to the doctor more often and incur more medical costs; their illnesses last longer and they are more likely to be absent from work.

II. Every Day a Smoker Refrains from Lighting Up is a Day Closer to a Healthier Body for That Smoker

The American Cancer Society offers the following timeline for the benefits a former smoker would enjoy upon quitting:

- A mere 20 minutes after quitting, her blood pressure and body temperature reach their normal rates;
- 8 hours after quitting, the carbon monoxide level in the blood returns to normal;
- 24 hours after quitting, the chances of having a heart attack decrease;
- Within a few weeks of quitting, lung function increases and circulation improves;
- 1 to 9 months after quitting, respiratory problems subside;
- within a year of quitting the risk of coronary heart disease is half that of a smoker’s.
- Over time, the risk of lung, mouth, throat, kidney, and other cancers decrease, and after 15 years of abstinence the risk of coronary heart disease decreases to that of a non-smoker’s.

The National Cancer Institute estimates that after 10 to 15 years from a quit date, a person’s risk of premature death reaches that of a person who has never smoked.

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After 10 years, the risk of lung cancer is 30 to 50% less than that of a smoker. Women who quit before or during the first 3 month of pregnancy can reverse the risk of low birth weight and can reduce other pregnancy related risks.

III. Cigarettes are an Addictive Drug Which Create a Cycle of Need Every Day That is Difficult to Break

While many smokers may not yet know of the newly discovered risks of smoking, they do know that smoking is bad for them. Every cigarette pack and carton must display warnings informing the consumer of such risks as lung cancers, heart disease, complications in pregnancy, etc. So why do 19% of adults in this country smoke cigarettes on a daily basis?13

Cigarettes (and other forms of tobacco) are addictive because of the presence of nicotine in tobacco.14 Nicotine produces effects of pleasure, arousal, and enhanced mental performance, but the brain rapidly develops a tolerance for it throughout the day.15 Thus, the first cigarette smoked each day produces the most substantial effects, with an accumulation of nicotine in the body desensitizing the smoker to the effects with each cigarette and creating the impression of abstinence.16 Smokers tend to smoke more frequently as the day wears on to combat this impression.17 This “cycle” begins again the next day, as the 8 hour or so abstinence created by a night’s sleep reenstizes the smoker to the pharmacological effects of the nicotine.18

Nicotine is shaped like the neurotransmitter acetylcholine, which is naturally found in the body and enhances the release of other neurotransmitters.19 These neurotransmitters have been “speculatively linked” to pleasure, appetite suppression,

15 Id. at 30.
16 Id.
17 Id.
18 Id.
19 Id. at 34.
arousal, cognitive enhancement, memory improvement, mood modulation, and reduction of anxiety and tension.\textsuperscript{20} Neuroadaption, or building a tolerance to nicotine, happens over the course of a day as described above. Smokers aren’t completely resensitized each night, however, and develop a tolerance over time causing them to smoke more cigarettes (or use more tobacco products) and making it very difficult to cease the use of tobacco products. While there is some scientific evidence that increased mental performance is a direct result of nicotine use, many of the “gratifying effects” of nicotine (relaxation, pleasure, reduced anger and tension, etc.) are due to relief of the symptoms associated with nicotine withdrawal.\textsuperscript{21}

Behavioral reinforcement for smoking is enhanced by the rapidity in which the pleasurable effects of smoking are felt; nicotine reaches the brain less than 20 seconds after inhaling smoke from a cigarette.\textsuperscript{22} The immediate pharmacological affects and the subsiding of withdrawal symptoms that the smoker experiences almost immediately after the first puff create anticipatory responses in regular smokers.\textsuperscript{23} For example, if a person typically has a cigarette after finishing a meal, she will begin to associate smoking with the completion of a meal and it will be more difficult for her to refrain from smoking after eating. Furthermore, the rituals associated with smoking, such as lighting up, or the sensations associated with smoking, such as a burning in the throat, also become pleasurable as anticipatory mechanisms.\textsuperscript{24}

A person attempting to quit smoking must overcome nicotine withdrawal as well as pleasurable behaviors associated with smoking. Withdrawal symptoms may include: Restlessness, increased food consumption, anxiety, impatience, irritability, depression, fatigue, dizziness, sweating, headaches, insomnia, etc.\textsuperscript{25} Many of these symptoms subside after only a few days. Cravings, however, may last for months or years, as may recurrent anticipatory responses.

\begin{itemize}
\item \textsuperscript{20} Id. at 34-35.
\item \textsuperscript{21} Id. at 33.
\item \textsuperscript{22} Id. at 36.
\item \textsuperscript{23} Id. at 38.
\item \textsuperscript{24} Id. at 39.
\item \textsuperscript{25} Id. at 33.
\end{itemize}
Smoking 20 cigarettes a day indicates a high level of nicotine dependence; smoking at least 10 cigarettes per day indicates a moderate level of nicotine dependence. Daily smokers smoke an average of 18 cigarettes per day, and 54% of adult smokers smoke more than 15 cigarettes per day. Thus, the majority of smokers in this country experience at least a moderate level of nicotine dependence; many may wake up at night to smoke or reach for a cigarette within a half hour to an hour of waking up in the morning.

IV. Nicotine Replacement Therapy, Bupropion and Counseling Are Effective Treatments to Assist Smokers in Quitting Smoking

The higher a person’s nicotine dependence, the more difficult it will likely be to quit. While the Centers for Disease Control and Prevention reports that 7 in 10 smokers profess a desire to quit, other surveys have shown that percentages of smokers who plan to make an attempt are much lower. One estimate is that 33% of smokers make a quit attempt each year. Michael Fiore, M.D., M.P.H., the director of the Center for Tobacco Research and Intervention at the University of Wisconsin, estimates that the average ex-smoker has gone through 5 or 6 quit attempts before successfully kicking the habit.

Smoking cessation strategies drastically increase a smoker’s chances of quitting. There are currently three categories of smoking cessation therapies: Nicotine Replacement Therapy (hereinafter “NRT”), Pharmaceuticals, and Counseling. Jill Williams, MD, Assistant Professor of Psychiatry at the University of Medicine and Dentistry of New Jersey estimates that 1 in 4 smokers using either NRT or

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27 The Nature of Nicotine Addiction, supra note 14, at 33.
28 Id. at 38
29 Lamberg, supra note 26.
31 Lamberg, supra note 26.
33 Id.
pharmaceuticals eventually quits. The best results stem from a combination of the three approaches.

a. NRT Significantly Increases the Success Rate of Quit Attempts Made by Smokers who are Addicted to Nicotine.

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34 Lamberg, supra note 26
NRT\textsuperscript{35} allows users to maintain nicotine levels while making the initial adjustment to not smoking by delivering nicotine to smokers in a safe manner,\textsuperscript{36} helping

\textsuperscript{35} The following chart provides an explanation of each of the NRT products available on the market:

<table>
<thead>
<tr>
<th>Mode of delivery</th>
<th>Common Brand Name(s)</th>
<th>Availability</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gum</td>
<td>Nicorette\textsuperscript{®}</td>
<td>Over-the-counter (OTC)</td>
<td>When chewed, the gum releases nicotine that is absorbed through the buccal mucosa (inner lining of the cheeks and lips). To fight cravings, this product provides rapid delivery of nicotine as well as a coping mechanism. Studies consistently demonstrate that the higher (4mg) dose gum is significantly more effective in assisting heavier smokers to quit.</td>
</tr>
<tr>
<td>Patch</td>
<td>Nicoderm\textsuperscript{®}, Habitrol\textsuperscript{®}, Prostep\textsuperscript{®}, Nicotrol\textsuperscript{®}</td>
<td>OTC and prescription</td>
<td>This product was introduced to overcome compliance difficulties with other delivery methods such as the gum. The patch is worn either all day or only during waking hours. It is very easy to use, but does not provide a quick burst of nicotine or a coping mechanism to help users resist to cravings.</td>
</tr>
<tr>
<td>Inhaler</td>
<td>Nicotrol\textsuperscript{®}</td>
<td>Prescription</td>
<td>This product is targeted to smokers who miss the hand to mouth movement of smoking and who smoke less than 20 cigarettes per day. Despite appearance, delivery takes place in the buccal mucosa of the mouth, not the lungs. It addresses the craving symptoms of nicotine withdrawal by providing rapid delivery of nicotine.</td>
</tr>
<tr>
<td>Nasal Spray</td>
<td>Nicotrol\textsuperscript{®}</td>
<td>Prescription</td>
<td>This product is snorted through the nostrils as needed and provides the most rapid nicotine delivery of any NRT. However, studies have shown the side effects (nose, eye and throat irritation) to be significant during the first few weeks of use.</td>
</tr>
<tr>
<td>Lozenge</td>
<td>Commit\textsuperscript{®}</td>
<td>OTC</td>
<td>This product is a small tablet that is held under the tongue as it slowly dissolves, releasing nicotine. This product has the advantage of being discreet, like the patch, but delivers nicotine more rapidly.</td>
</tr>
</tbody>
</table>
to alleviate cravings and other symptoms of nicotine withdrawal and increasing the likelihood that the quit attempt will be successful. Some NRT delivery methods (gum, lozenges, sprays and inhalers) deliver nicotine rapidly, helping users resist acute cravings by quickly increasing nicotine levels. Many NRT products also provide the user with a coping mechanism to resist cravings by combating the recurrent anticipatory mechanisms associated with smoking.

NRT is considerably safer than all tobacco products for the delivery of nicotine. The long term use of NRT is not associated with any serious health problems. However, certain populations should not use NRT. For example, pregnant and breast feeding mothers, individuals with acute cardiovascular conditions, and adolescents should not use NRT. While NRT use is generally safe, it is important to maintain a safe dose of nicotine. NRT users should not simultaneously use tobacco products, as doing so

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37 See NF Woolacott et al., *The Clinical Effectiveness and Cost-Effectiveness of Bupropion and Nicotine Replacement Therapy for Smoking Cessation: A Systematic Review and Economic Evaluation*, 6 HEALTH TECH. ASSESS No. 16 (2002); Fiore et al, supra note 36. There is some evidence that women using NRT have a somewhat lower success rate than men. Antonio Cepeda-Benito et al., *Meta-Analysis of the Efficacy of Nicotine Replacement Therapy for Smoking Cessation: Differences Between Men and Women*, 72 TEX. J. CONSULTING & CLINICAL PSYCHOL No. 4. However, evidence demonstrates that NRT is equally effective in teens as in adults. Joel D. Killen et al., *Randomized Clinical Trial of the Efficacy of Bupropion Combined with Nicotine Patch in the Treatment of Adolescent Smokers*, 72 STAN. J. CONSULTING & CLINICAL PSYCHOL., No. 4; CL Backinger et al., *Adolescents and Young Adult Tobacco Prevention and Cessation: Current Status and Future Directions*, TOB. CONTROL Dec, 12 Suppl 4:IV46-IV53 (2003).
38 See supra note 36.
39 See supra note 36.
40 NRT is safe for individuals with stable cardiovascular disease. AM Joseph et al., *The Safety of Transdermal Nicotine as an Aid to Smoking Cessation in Patients With Cardiac Disease*, 335 N. ENGL. J. MED. 1792 (1996).
41 NL Benowitz, *Nicotine Replacement Therapy During Pregnancy*, 266 J. AM. MED. ASS’N 3174 (1991); *Nicotine Replacement Therapy for Patients With Coronary Artery Disease*, 154 ARCH. INTERN. MED. 989 (1994); Joel D. Killen et al., *Randomized Clinical Trial of the Efficacy of Bupropion Combined with Nicotine Patch in the Treatment of Adolescent Smokers*, 72 STAN. J. CONSULTING & CLINICAL PSYCHOL. No. 4; Backinger et al., supra note 37. It should be noted that all of these populations are also strongly advised not to use tobacco products.
can lead to a nicotine overdose. Further, recommendations for dose and duration of use vary depending on the type of NRT and are not standardized. Therefore, while NRT is much safer than tobacco products, it can cause health problems if not used properly.

Typically, NRT is recommended for at least six to eight weeks but not more than three or four months following the cessation of smoking. Using multiple NRT products simultaneously can increase effectiveness. For example, to maintain a steady base level of nicotine, a patch can be worn twenty four hours-a-day and a rapid delivery mechanism such as the gum or a lozenge can be used occasionally to combat acute cravings. Finally, there is no standardized recommendation for how often a user can initiate NRT use.

NRT does not completely remove tobacco cravings; however, when used properly, it reduces cravings significantly. A great many NRT users do not use enough NRT to maintain existing nicotine levels, resulting in a significant reduction in relief from cravings. This is not as much of a problem with the transdermal patch because the patch is simply applied once or twice a day and automatically delivers a steady dose of nicotine into the bloodstream. However, many users of the gum, lozenges, inhalers and

42 Molyneux, *Nicotine Replacement Therapy*, 328 BRIT. MED. ASS’N 7437, available at http://Brit. Med. Ass’njournals.com/cgi/content/full/328/7437/454. Typical nicotine overdose symptoms include nausea, vomiting, dizziness, weakness, and a rapid heartbeat. However, in rare circumstances nicotine overdose has been known to cause heart attacks.


44 Diefenbach LJ & Smith PO, *What is the Most Effective Nicotine Replacement Therapy?*, J. FAM. PRAC. (June, 2003) (concluding that combining methods that maintain constant drug levels (transdermal patch) with those having more rapid effects (gum, spray, inhaler, lozenge) is more effective that monotherapy); M Kornitzer M et al., *Combined Use of Nicotine Patch and Gum in Smoking Cessation: A Placebo-Controlled Clinical Trial*, 24 PREVENTATIVE MED. 41 (1995).

45 See Fiore et al, supra note 36.

46 Id.

47 For nicotine gum to be fully effective, the following is recommended: “(1) do not eat or drink for 15 minutes before using, or while chewing the gum; (2) chew the gum slowly on and off for 30 minutes to release most of the nicotine. Parking the gum between the cheek and gum allows the absorption of nicotine into the lining of the cheek; (3) chew enough gum to reduce withdrawal symptoms (10-15 pieces a day but no more than 30 a day); (4) use the gum for about a month or so, then start to reduce the number of pieces you chew a day, chewing only what you need to avoid withdrawal symptoms; and (5) discontinue use of the gum after three months.” *Nicotine Replacement*, American Lung
nasal spray do not utilize enough of the NRT products to maintain nicotine levels similar to when the individual actively used tobacco products.\textsuperscript{48} For maximum relief from cravings, the user should maintain nicotine levels throughout the day that are similar to those provided by smoking.

Cigarettes deliver nicotine much more quickly than even the rapid delivery NRT products such as the inhaler and gum. The fastest delivery available from NRT takes a few minutes; however, as mentioned earlier, cigarettes deliver a similar or greater dose of nicotine in a few seconds.\textsuperscript{49} This slower delivery is due to the utilization of a different nicotine delivery mechanism than cigarettes. All forms of NRT rely on systemic venous absorption, instead of systemic arterial delivery used by tobacco smoke.\textsuperscript{50} Therefore, NRT provides significant, but partial relief from nicotine cravings.

In addition to relief from nicotine cravings, NRT also provides users a form of behavioral therapy. A significant component to tobacco addiction is the compulsive behavior associated with its use.\textsuperscript{51} For example, the repetitive hand-to-mouth motion associated with cigarette smoking is a significant aspect of cigarette addiction. Some NRT products assist smokers with this type of craving by providing a similar hand-to-mouth movement. Inhaler products deliver nicotine by using a device that is drawn on orally, just as cigarettes are. Therefore, NRT provides assistance with the behavioral component of tobacco addiction as well as the chemical component.

The effectiveness of NRT has been thoroughly investigated. The data generally demonstrate that NRT increases the odds of quitting approximately one and a half to two times, regardless of setting.\textsuperscript{52} Specific studies performed using different types of NRT

\begin{footnotesize}
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\item \textsuperscript{48} See Fiore et al, supra note 36.
\item \textsuperscript{49} Molyneux, supra note 42.
\item \textsuperscript{50} Id.
\item \textsuperscript{51} Zab Mohsenifar, \textit{Smoking and Quitting Smoking}, Medicinenet.com, October 26, 2004, \textit{available at} http://www.medicinenet.com/smoking_and_quitting_smoking/article.htm. See also supra notes 22 to 25 and accompanying text.
\item \textsuperscript{52} C Silagy et al., \textit{Nicotine Replacement Therapy for Smoking Cessation}, PMID: 10908462 PubMed, 2004. It must be noted that there is some evidence that NRT has lost its effectiveness since becoming available over-the-counter (OTC). A study published in the September 11, 2002 issue of the \textit{Journal of the American Medical Association}
\end{itemize}
\end{footnotesize}
and combinations of NRT consistently return results approximately within this range.\textsuperscript{53} However, evidence demonstrates that NRT is significantly more effective for moderate and heavier smokers.\textsuperscript{54} Therefore, NRT is very effective in increasing success rates for tobacco quit attempts made by tobacco users who are addicted to nicotine.

\textbf{b. Bupropion is the Most Frequently Prescribed and Effective Pharmaceutical Treatment for Aiding Tobacco Quit Attempts}

After NRT, Bupropion HCL (sold under the trade names Zyban and Wellbutrin) is by far the most frequently prescribed pharmaceutical for smoking cessation.\textsuperscript{55} Bupropion is used to treat depression as well as smoking cessation. The typical dose for smoking cessation is 300mg/day. Treatment is initiated one week prior to quitting smoking, because approximately one week is required to achieve steady-state blood levels of Bupropion. The mechanism by which the drug provides smoking cessation assistance is not fully understood. However, it is known that Bupropion inhibits reuptake of dopamine, noradrenaline, and serotonin in the central nervous system, is a non-competitive nicotine receptor antagonist, and at high concentrations inhibits the firing of

\begin{footnotesize}
\textsuperscript{53} Silagy et al., supra note 52.
\textsuperscript{54} Lisa J. Diefenbach & Patrick O. Smith, \textit{What is the Most Effective Nicotine Replacement Therapy?}, J. Fam. Pract., June 2003; This is common sense because heavier smokers are addicted to heavy doses of nicotine, while light smokers are triggered by social settings or a desire for relaxation.
\end{footnotesize}
noradrenergic neurons in the locus caeruleus.\textsuperscript{56} Research has not demonstrated which of these effects is responsible for reducing nicotine cravings, but inhibition of the reduction in levels of dopamine and noradrenaline levels that normally occur during nicotine withdrawal are likely important.\textsuperscript{57}

The most serious side effect of Bupropion is seizure which affects approximately one in one thousand users.\textsuperscript{58} Other, more common, but less severe side effects include dry mouth, insomnia, skin rash, pruritus and hypersensitivity.\textsuperscript{59} Evidence shows that other than the rare occurrence of seizures, Bupropion causes no significant side effects.

Studies have demonstrated that Bupropion increases long term abstinence from smoking.\textsuperscript{60} The majority of studies demonstrate that Bupropion is as effective as NRT, approximately doubling the success rate of quit attempts.\textsuperscript{61} However, the few studies that have compared the effectiveness of Bupropion to that of NRT provide inconclusive results.\textsuperscript{62} Similarly, studies of NRT combined with Bupropion have yielded inconclusive results.\textsuperscript{63}

\textsuperscript{56} Id.
\textsuperscript{57} Id.
\textsuperscript{58} Woolacott et al, supra note 37 (concluding that the overall safety profile of NRT is more favorable to Bupropion because of the small but real risk of seizure with Bupropion).
\textsuperscript{60} Roddy, supra note 55.
\textsuperscript{62} Jorenby et al., supra note 61.
\textsuperscript{63} Woolacott et al., supra note 37 (concluding that the relative effectiveness of Bupropion and NRT still needs further research);
In addition to Bupropion, Clonidine,\textsuperscript{64} Nortriptyline,\textsuperscript{65} and a few other drugs\textsuperscript{66} are also used to assist tobacco users with quit attempts. However, evidence of the effectiveness of these drugs is much less conclusive than that relating to the use of NRT and Bupropion. These additional pharmacological treatments are consequently prescribed much less frequently than Bupropion. They are typically only prescribed if the tobacco user is unable to use NRT and Bupropion. Therefore, Bupropion is the most effective and frequently prescribed pharmaceutical treatment for tobacco cessation.

c. Counseling Increases Success Rates for Tobacco Quit Attempts

Evidence suggests that counseling is an effective tool in smoking cessation.\textsuperscript{67} There are three main types of counseling for smoking cessation. First, health care professionals can intervene in patient’s habits, pointing out the damage caused by tobacco use and advising that the patient quit. Second, health care professionals can counsel patients on the proper use of NRT and Bupropion. Third, traditional counseling can be provided by mental health professionals who seek to create positive behavior changes regarding tobacco use.

\textsuperscript{64} Clonidine is an anti-hypertensive medication that is occasionally used for smoking cessation as well as for the reduction of symptoms experienced during alcohol and opiate withdrawal. Roddy, supra note 55. Clinical trials demonstrate significant increases in smoking cessation when using the drug; however, the drug also causes serious side effects. Id. Sedation and postural hypotension are cited as the most serious side effects. Therefore, Clonidine is rarely used for smoking cessation. Id.

\textsuperscript{65} Nortriptyline is a tricyclic antidepressant with mostly noradrenergic properties and a small amount of dopaminergic activity. Roddy, supra note 55. This drug is thought to assist quit attempts in a similar way and to a similar extent as Bupropion; however, there is less scientific evidence supporting its effectiveness. Id. Fewer studies have been performed to study Nortriptyline’s effect on smoking cessation. It is much less popular than Bupropin for assisting quit attempts. Id.

\textsuperscript{66} A few inconclusive studies of the use of Anxiolytics, benzodiazepines, and Beta-blockers in smoking cessation have been conducted. Also, studies of Silver acetate and Mecamylamine have demonstrated little or no effectiveness in smoking cessation. All of these other drugs are occasionally prescribed for tobacco cessation, but usually only when other pharmaceuticals cannot be used. Roddy, supra note 55.

\textsuperscript{67} Lamberg, supra note 26. However, other evidence indicates that cessation is only achieved in one out of forty cases. Coleman T, \textit{Use of Simple Advice and Behavioral Support}, 328 BRIT. MED. J., February 14, 2004 at 397; see also Fiore et al, supra note 36.
Many primary care physicians question patients on smoking habits and encourage them to quit during routine office visits, although there is some evidence that psychiatrists fall behind other medical professionals in the frequency of interventions. While this type of counseling is effective for all tobacco users, physicians are more likely to provide it to “high-risk” middle-age or elderly patients who suffer from or are at high risk for cardiovascular diseases. Intervention is more effective if significant time is spent discussing cessation techniques and if a follow up visit is scheduled to review progress. Therefore, simple interventions performed by health professionals can be an effective first step to successful cessation.

Many health professionals provide in depth explanations on the pharmacological and non-pharmacological treatments available and how to effectively utilize the treatment or treatments chosen. This type of counseling is very important for the successful use of many NRT products, particularly with NRT products other than the patch. Advice that is more intensive than a simple intervention, such as holding a prolonged discussion, utilizing additional methods of reinforcement such as videos, CD Roms, or manuals can increase the likelihood of a successful cessation significantly.

Finally, some tobacco users seeking to quit utilize intensive behavioral therapy. This type of counseling usually involves a review of the patient’s history with tobacco and motivation to quit, followed by identification of situations in which the user was at

68 AN Thorndike et al., U.S. Physicians’ Treatment of Smoking in Outpatients With Psychiatric Diagnoses, 3 NICOTINE TOB. RES. 85 (2001) (concluding that physicians provide smoking-cessation interventions to about one-fifth of their patients who smoke).
69 See S Himelhoch S & G Daumit, To Whom do Psychiatrists Offer Smoking-Cessation Counseling?, 160 AM J PSYCHIATRY, December 2003 at 2228 (concluding that while psychiatrists have higher odds of offering smoking cessation counseling to certain high risk subgroups, they may be missing significant opportunities to offer smoking cessation counseling to their patients who smoke). However, evidence that psychiatric patients have a higher instance of smoking is not evidence that psychiatrists are not performing interventions.
71 Coleman, supra note 67.
72 Id.
73 See supra note 47.
74 Coleman, supra note 67 (stating that the use of self help manuals, videos, or CD Roms and other demonstrational devices or methods can increase success rates by a factor of 1.4).
high risk of relapse during previous quit attempts. Then, the therapist teaches the patient how to deal with or avoid these situations in the future without smoking. For this type of counseling, well-trained professional counselors are required.

The effectiveness of these three different types of counseling varies. The evidence generally recognizes that intensive behavioral therapy is the most effective non-pharmacological treatment for tobacco dependence.\(^{75}\) The effectiveness of counseling services increases as their intensity increases.\(^{76}\) Thus, face to face counseling and interactive telephone counseling are more effective than services that only provide educational or self-help materials.\(^{77}\) Further, evidence demonstrates that physician interventions are much more effective when a follow up appointment is scheduled to monitor success and provide advice on NRT use. Finally, studies demonstrate that combinations of tobacco cessation treatments are the most effective.\(^{78}\) Therefore, the optimal combination for tobacco cessation success would be intensive behavioral therapy\(^{79}\) combined with NRT and or Bupropion.

V. The Need for Health Insurance Coverage of Tobacco Cessation Treatments

Tobacco cessation treatments increase the success rate of quit attempts.\(^{80}\) Further, these treatments are cost effective in terms of life-years saved.\(^{81}\) Research comparing the cost of cessation treatments to the benefits of improved health and a longer life expectancy have demonstrated that cessation treatments are either cost-saving or cost-
Researchers estimate that comprehensive tobacco cessation coverage (including NRT and pharmaceuticals) costs between 10 and 40 cents per member per month.\textsuperscript{83} By contrast, the annual cost of tobacco use is about $3,400 per smoker or $7.18 per pack of cigarettes sold.\textsuperscript{84} However, despite the overall financial savings, there are significant up front costs associated with providing cessation treatments to smokers.

Health insurance spreads the cost of cessation treatment over many individuals, drastically reducing the cost for the users. Evidence demonstrates that individuals with health insurance coverage of cessation treatments are more likely to quit\textsuperscript{85} and are more likely to use cessation treatments to do so.\textsuperscript{86} Therefore, health insurance coverage for cessation treatments appears to be an effective method of making these treatments available for smokers.

The average smoker incurs significantly more medical expenses during their lifetime and misses significantly more days of work each year than non-smokers. Men who smoke incur $15,800\textsuperscript{87} (in 2002 dollars) more in lifetime medical expenses and are absent from work 4 days more per year than men who do not smoke,\textsuperscript{88} while women who smoke incur $17,500\textsuperscript{89} (in 2002 dollars) more in lifetime medical expenses and are

\begin{thebibliography}{99}
\bibitem{84} Centers for Disease Control and Prevention, \textit{Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999, Morbidity and Mortality Weekly Report} 2002;51(14); 300-03.
\bibitem{85} Curry, supra note 83.
\bibitem{87} T Hodgson T, \textit{Cigarette Smoking and Lifetime Medical Expenditures}, 70 \textit{MILBANK QUARTERLY} 81 (1992).
\bibitem{88} Warner et al., supra note 82.
\bibitem{89} Hodgson, supra note 87.
\end{thebibliography}
absent from work 4 more days per year than women who do not smoke. Employers thus have a significant financial incentive to assist smoking employees with quit attempts.

Employers who have provided health insurance coverage for their employees have been rewarded in numerous ways. These employers report that both the number of smokers seeking treatment and the percentage of successful quit attempts increase. As a result of these increases, employers providing cessation benefits have seen financial returns in four ways: (1) reduced health care costs; (2) reduced absenteeism; (3) increased work productivity; and (4) reduced life insurance costs. While obtaining these benefits requires an initial expenditure to cover the additional costs of cessation benefits, this investment equalizes at about three years, with benefits exceeding costs by five years. Further, tobacco cessation benefits are more cost-effective than some commonly covered disease prevention treatments, including treatment for hypertension and high cholesterol. Therefore, providing health insurance coverage of tobacco cessation treatments to employees is a sound investment for employers.

VI. States Have Begun to Mandate Health Insurance Coverage for Tobacco Cessation Treatments

While health insurance coverage of cessation treatments is a relatively recent development, coverage of these treatments is increasing. As of 2002, seventy-one percent of the health plans in the United States provided some coverage for cessation

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90 Warner et al., supra note 82.
92 Warner et al., supra note 82; EH Wagner et al., The Impact of Smoking and Quitting on Health Care Use, 155 ARCH. INTERNAL MED. 1789 (1995).
93 Warner et al., supra note 82; MT Halpern et al., Impact of Smoking Status on Workplace Absenteeism and Productivity, 10 TOBACCO CONTROL 233 (2001).
94 Warner et al., supra note 82; Halpern et al., supra note 93.
95 Warner et al., supra note 82.
96 Id.
treatments. This is a large increase over the previous five years. In order to solidify and increase this trend, states are beginning to require that health insurance providers include tobacco cessation benefits in health insurance plans.

In 2003, the New Mexico legislature passed a bill mandating tobacco cessation benefits for health insurance contracts in the state. The act’s provisions “apply to policies, plans, contracts and certificates issued for delivery or renewed, extended or amended pursuant to the New Mexico Insurance Code in on or after July 1, 2003.” The Act requires that all health insurance policies issued in the state that provide maternity benefits must also provide the following tobacco cessation benefits (as implemented by regulations): (1) diagnostic services necessary to identify tobacco use, use-related conditions and dependence; (2) two 90-day courses of pharmacotherapy (Nicotine Replacement Therapy and other pharmaceuticals) per calendar year; and (3) a choice of cessation counseling of up to 90 minutes total provider contact time or two multi-session group programs per calendar year. However, the Act exempts policies that are short-term, for travel, or that cover only specific diseases from its provisions. While New Mexico is the first and only state to pass this type of legislation so far, other state legislatures are considering similar legislation. The trend toward mandating tobacco cessation benefits has begun.

VII. Tobacco Cessation Coverage Makes Sense as Part of The Proven Commitment to Requiring Comprehensive Health Insurance for Maryland Residents

The Maryland Insurance Article Sections 15-801 through 15-840 currently includes 33 mandated health care services or treatments, 4 mandates involving

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99 Id.
100 Id.
102 Id.
105 E.g., California SB 599 in 2001 and SB 1192 in 2004 (California SB 1192 failed to pass the Assembly Committee on Health with a vote of 7 to 5 on 6/22/04) would have mandated tobacco cessation benefits for health insurance and were narrowly defeated. Further, in March of 2003, an Oklahoma bill mandating health insurance coverage of tobacco cessation treatments was defeated by a vote of 50 to 49.
prescription drug plan requirements, and 3 other health insurance mandates. Section 802, Benefits for treatment of mental illnesses, emotional disorders, and drug and alcohol abuse, prohibits insurance policies from drawing distinctions between diagnosis and treatment of the covered illnesses and the diagnosis and treatment of physical illness. Comparisons between tobacco dependence and alcohol and drug addiction result in the conclusion that it is more difficult to quit smoking than it is to beat other addictions because tobacco products are legal and therefore much easier to get, the use of tobacco products is socially acceptable (to some extent), tobacco users are accustomed to having nicotine in their blood all day, and they have to deal with the anticipatory mechanisms related to smoking. Maryland residents benefit from mandates for coverage of treatments for mental illness and drug and alcohol addiction, but the need for coverage for the treatment of nicotine addiction may be greater and more widespread. Because Maryland is a leader in the region for mandated health care benefits, it makes sense for Maryland to join New Mexico in leading the nation to mandated tobacco cessation benefits for all.

The proposed bill incorporates the three kinds of tobacco cessation treatments discussed above; NRT, pharmaceuticals, and counseling. It requires first that prescription drug plans in Maryland provide coverage for any pharmaceutical approved by the FDA as an aid for smoking cessation if it is prescribed by an authorized prescriber, and that such drug plans ALSO provide coverage for no less than two 90 day courses of NRT each year if it is prescribed by an authorized prescriber. With this requirement in place, smokers who might not otherwise be able to afford NRT or buproprion could have access to these effective tobacco cessation therapies. Furthermore, by separating out the two forms of therapy, unlike New Mexico, patients would have the proven benefit of trying the two together.

Recognizing that quit attempts work best with the support and encouragement of a smoker’s doctor, particularly soon after a quit date, and that patients will benefit from the supervision of a medical professional when using NRT or pharmaceuticals, the second part of the bill requires health insurance plans in Maryland to cover limited office visits

to a physician or other health care professional for evaluation or treatment to assist the individual to cease the use of tobacco products and limited office visits to a physician or other health care professional for the management and evaluation of a course of pharmacotherapy.

This bill does not mandate coverage for the kind of intensive behavioral therapy that has been shown to be most effective for the cessation of use of tobacco products. This is in part due to the lack of availability of such services from medical health professionals, and in part due to the availability of such services at no cost to the smoker through local groups, departments of health, etc. The American Legacy Foundation\textsuperscript{107} runs a quitline, available at 1-800-399-5589, which provides free counseling over the phone. Trained professionals can offer advice and information, help choose a quit date, and provide behavioral therapy. They will also follow up with a smoker who is attempting to quit by calling her back after her quit date to see how she’s doing and offer support. The quitline is also a resource for free group therapy sessions through local health departments and other organizations. For example, the Baltimore City Health Department group counseling and a smoking support group. Maryland General Hospital has a weekly meeting based upon behavior modification for smokers. Saint Joseph’s Medical Center offers a group program based on behavior modification, NRT, and planning. Many other programs exist around Baltimore and the rest of the state; The American Legacy Foundation quitline is a resource for finding out about them.

\textbf{VIII. Mandating Benefits for Tobacco Cessation in Maryland Makes Financial Sense}

All Marylanders have a financial interest in reducing smoking. Smoking currently drains Maryland tax dollars used to treat tobacco related heath problems in the uninsured. Further, the state economy absorbs reductions in productivity caused by smoking related health problems. Therefore, non-smokers will see financial gains if tobacco cessation rates increase.

However, some argue that health insurance should not be used to spread the costs of cessation to all Marylanders because smokers themselves should bear the entire financial cost of their choice to smoke. This argument is usually supported by the

\textsuperscript{107} The American Legacy Foundation has a website at www.americanlegacy.org.
premise that for decades smokers have known that smoking is unhealthy and highly addictive. However, tobacco companies have lied about the health impacts of smoking and have targeted more vulnerable young people as a way of replacing dying and quitting customers. Therefore, smokers are not entirely culpable for their choice to smoke. For this reason, arguments about the culpability of smokers should not be used to undermine the rationality of mandating cessation benefits.

Further, the reduction in health insurance claims that would result from mandated cessation benefits would eventually more than pay for the up front costs. As more smokers utilize cessation treatments, more smokers will quit. As more smokers quit, tobacco related illnesses will decrease. As tobacco related diseases decrease, claims will decrease. The result will be a reduction in health costs that is greater than the up front costs of a mandated cessation benefit.

However, some argue that adding yet another mandated health insurance benefit will increase the cost of health insurance; thus, reducing the number of people who can afford insurance. It is true that cessation benefits cost money, but the costs will be modest and short term. Therefore, because of the low cost of cessation treatments and the high cost of insurance claims for treatment of tobacco related health problems, mandated cessation benefits are a financial investment that will yield high returns.

**Conclusion**

Maryland has shown its commitment to public health by leading the region in mandated health insurance benefits. The mandated tobacco cessation benefit is the next step in commitment. Tobacco cessation treatments are effective. All Marylanders have an interest in making them available to every Maryland smoker who wants to quit. This legislature has the power to significantly decrease the incidence of lung cancers, coronary heart diseases, cancers of the mouth and esophagus, instances of low birth weight, and a whole host of other ailments associated with the use of addictive tobacco products. This modest investment will pay huge financial and quality of life dividends for all Marylanders.