

TESTIMONY SUPPORT OF SB2024 - Support for funding BreatheND

January 11, 2017

DR. JAMES A. HUGHES

PHONE: 701-220-1990

Chairman Holmberg and members of the Senate Appropriations Committee:

I worked as a pulmonary medicine physician at the Heart and Lung Clinic in Bismarck for over 33 years. I am deeply appreciative of the efforts of Breathe ND, recognizing that they are effective in reducing nicotine dependence and as a result are saving lives as they save health care dollars. I have always been a strong advocate for tobacco control, but recognize that it is not physician advice that will change the paradigm in the fight against nicotine addiction; it is a change in cultural norms and expectations. The dedicated and diligent team at BreatheND has built a program that is working. The best news is that youth tobacco use has been cut in half, and there has been dramatic progress in limiting second hand smoke exposure in public spaces. Lives and money are being saved, and young lives are not being lost to years of dependency and disease. I see the work being done at BreatheND as challenging and I know it demands self-sacrifice, particularly as their work is met with active resistance from some members of our community. The reward for doing this work is that it saves lives. Disease management, which was my life's work, is vastly more expensive than primary prevention. The process of building the BreatheND team to the point that it is recognized as one of the best in the country has taken valuable time and the deep commitment of very special professionals. I see their work as being done diligently, with deep respect for the gravity of this public health crisis. I feel they deserve our deepest appreciation, and we should be facilitating their good work, not obstructing it.

We need a comprehensive campaign to establish what works, and to creatively address a public health disaster that persists 52 years after the first Surgeon General's Report documenting tobacco's role as a public health tragedy. Nicotine remains the number one cause of avoidable disease and death in the United States. How is it that our youth are still falling victim? Part of the problem in dealing with tobacco is that there are dollars-whether tax or retail-to be made today, while the true cost of nicotine to society and its users is deferred for many years. But is that a valid perspective? Is the cost deferred? Lost days from work due to asthma, heart attack, stroke, pneumonia, Sudden Infant Death Syndrome - these conditions are part of the acute cost of tobacco. Then there is the time people are away from work and their families while they work to maintain their nicotine blood levels. Smokers begin to withdraw from nicotine after 30 minutes. A pack a day smoker will have to spend the equivalent of 13.5 40- hour work weeks smoking to maintain their blood levels. Over 70,000 puffs. A recent study of nicotine and cocaine has established that nicotine promotes cocaine addiction, not the other way around. Nicotine induces gene expression in the brain that literally causes new growth of neurons that increase stimulation of the brain tissues responsible for the development and maintenance of addiction. Nicotine is not only the most difficult drug to quit; it also acts to potentiate the power of cocaine to produce addictive behavior. It changes the brain in ways that increase responsiveness of areas responsible for long term memory (addictive reinforcement), and increases the high induced by cocaine. This research was done in rats, with the advantage of being able to selectively study precise areas of the brain, and to monitor behavior in controlled environments. It was published in the NEJM in 2014. The implications of this study are profound. The effect of nicotine required only 7 days of use before the effect on cocaine use was seen. That was the time needed before genetic alteration developed. The findings probably apply to opioids since the same neural pathways are involved in narcotic addiction. Epidemiological studies have clarified the link between nicotine and substance abuse. The following are excerpts from literature published by the Center for Tobacco Free Kids:

"Heavy smokers are much more likely to use marijuana or harder drugs. Youths who smoke more than 15 cigarettes a day are more than twice as likely to use an illicit drug and 16 times more likely to use cocaine than those who smoke less frequently -- and are 10 times more likely to use an illicit drug and

more than 100 times more likely to use cocaine than those who never smoke. Children who smoke a pack a day are also 13 times more likely to use heroin than children who smoke less heavily. In addition, 12- to 17-year-old smokers who smoke daily are approximately 14 times more likely to have binged on alcohol than those who do not smoke, more than 100 times more likely to have used marijuana at least ten times, and 32 times more likely to have used cocaine at least ten times."

"Teen smoking is an early warning sign for additional substance abuse problems. Youths age 12-17 who smoke are more than 11 times as likely to use illicit drugs and 16 times as likely to drink heavily as youths who do not smoke. As the U.S. Supreme Court noted in 1962, "The first step toward addiction may be as innocent as a boy's puff on a cigarette in an alleyway."

"The earlier a person uses tobacco, the more likely they are to experiment with cocaine, heroin or other illicit drugs. Those who start smoking as a child are three times more likely to use marijuana and four times more likely to use cocaine than those who do not smoke as children. In addition, more than half of all persons who start smoking before age 15 use an illicit drug in their lifetime, compared to only a quarter of those who do not start smoking until they are beyond age 17 -- with those who start smoking before age 15 are more than three times more likely to use cocaine. And those who start smoking before age 15 are seven times more likely to use cocaine than those who never smoke cigarettes at all. "

It is sobering to think, especially in light of the tragic heroin epidemic we are now facing, that this was published in 2002. What have we been doing?

Well, BreatheND has been practicing primary prevention. We urgently need them to continue their work to reduce youth access to, and pursuit of nicotine. We need the skills they have developed over the last 7-8 years and leverage them to help us confront these challenges. Please let them continue their work, and keep the organization intact so that they can mentor additional efforts that need to be ramped up in the state to confront the heroin epidemic. A teenage smoker is sending a message with their nicotine addiction. Tell them you love them today because they may not be here tomorrow. Our conversation on the subject of nicotine use has changed. So has the management of addiction to narcotics around the world. Managing opioid addiction thru criminalizing the activity has not controlled the problem. In desperation, countries have attempted to curb the epidemic by such methods as, safe needle programs, decriminalizing narcotics (Portugal) and even using extrajudicial killing (The Philippines).

Primary prevention and mitigation are the better course of action. I believe that nicotine can be viewed as not simply a gateway drug, but as a substance that sets the stage for addiction to opioids, amphetamines, alcohol, and marijuana. Figuratively, I think of nicotine as the architect and stage manager of addiction, inducing structural changes in the brain that set the stage for lifelong addiction. It is the marketing director, and public relations department for addiction since it is both legal (denigrating the negative connotation of addiction) and widely available. It is the chairman of the membership drive because it boosts the intensity of the illicit drug reward responses in the brain. It is the Producer since it spreads addiction to multiple agents thru society. And it persists even after the best attempts to quit narcotics-97.5% of addicts in methadone and buprenorphine substitution programs continue to use nicotine constantly. Ultimately it is the undertaker. For our youth, we have to stay very serious about primary prevention of drug addiction. Nicotine is at the tip to the spear. Keep BreatheND and help breathe life into their mission.

Respectfully submitted,
James A Hughes, MD
Bismarck, ND