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Please allow this letter to serve as the official submission of comments from World Lung Foundation to the Food and Drug Administration regarding Docket No FDA-2011-N-0867 concerning Harmful and Potentially Harmful Constituents in Tobacco Products.

World Lung Foundation is a non-profit, public charity organization registered in the State of New York. Its mission is to reduce the toll of lung disease, which kills 10 million people each year. The organization's primary area of emphasis is tobacco control.

WLF is one of five principal partners in the Bloomberg Initiative to Reduce Tobacco Use, a global effort to advance tobacco control using proven interventions. WLF has helped build capacity in global tobacco control in low and middle-income countries and one specific area of focus has been social marketing using mass media. In the past four years, WLF has developed and launched 80 mass media campaigns across 20 countries worldwide. WLF has also published a number of peer-reviewed research papers supporting the use of graphic imagery in mass media to reduce tobacco consumption.

Mass Awareness Communications: Focus on a Few Dangerous Ingredients for Which There Is Substantial Evidence

Numerous studies show that the use of new information, especially of a strong, emotive, graphic nature can motivate tobacco users to quit and can delay initiation among youth.¹ There is also strong evidence that health warnings on tobacco products are powerful motivators of cessation.² Communicating to mass audiences about some of the specific, dangerous constituents in cigarettes offers an opportunity to communicate new information about the health harms associated with these products.

While there is an exhaustive list of the thousands of complicated chemicals found in tobacco, and 7,000 constituents found in smoke and secondhand smoke,³ many of them are unfamiliar to the public. There is a precedent for selecting a few chemicals to communicate the potential risks of smoking cigarettes. Such information has been used in behavior change campaigns and on cigarette pack warnings globally. We recommend that if a mass awareness campaign is tried as a strategy to communicate the ingredients and their harms that this more focused approach is employed.

Several examples (below) use components of cigarette ingredients and smoke to inform about the dangers. These include the highly successful "Sponge" campaign

from New South Wales, Australia that used a sponge as a metaphor for lungs and depicted graphically the amount of tar a pack a day smoker is likely to ingest. When the “sponge” campaign first aired in Sydney in 1983, a decrease of nearly 3% was attributed to this campaign.⁴ The campaign has since been run in a dozen countries, including China and Russia, to strong impact. Post evaluation showed the campaigns increased awareness of tobacco harms. In India, smokers exposed to campaign were significantly more likely to say that they intend to quit in the future than those who were unexposed to the campaign. (70% vs. 66%) We also include a new pack warning from Canada, and a 2002 poster from New York City that was part of a smoke-free campaign.



What is second-hand smoke made of?
Some 4,000 chemicals, more than 40 of which have been proven to cause cancer.
Some of these poisons are...

- **Acetone**
Solvent found in nail polish remover
- **Ammonia**
Floor and toilet cleaner
- **Arsenic**
Poison
- **Benzene**
Industrial solvent associated with leukemia
- **Carbon Monoxide**
Odorless, invisible poison
- **DDT**
Insecticide
- **Formaldehyde**
Preservative for dead bodies, wood and fabrics

You don't have to smoke to die from it. Second-hand smoke kills.
For more information about second-hand smoke, call the New York Smokers' Quitline 1-888-609-4292

**Lungs are like sponges.
Smokers' lungs are like sponges full of tar.**

Our lungs are made up of millions of tiny air sacs, much like the texture of a household sponge. Every time you inhale cigarette smoke, you draw cancer-producing tar deep into your lungs. Some is coughed back up, some stays in your lungs, and some gets into your blood stream and spreads throughout your body. The more you smoke, the more tar goes in -- and the more your risk of diseases like lung cancer increases.

If you could squeeze out the cancer-producing tar that goes into a pack-a-day smoker's lungs every year, you'd get around 150mls -- or half a cup.

Giving up smoking is never easy but it is important, for you and your family. Call the Quitline, 13 7848, today for information and advice to help you quit and stay quit. The service is free and all of our advisors are trained professionals.

Quitline 13 7848 cancer institute NSW

In addition, people who saw ads from a 2008 smoke-free campaign in Mexico City, reported higher levels of understanding of the toxic ingredients in cigarette smoke, specifically arsenic and ammonia.⁵

For campaigns and for the warnings on cigarette packs, we recommend choosing a few recognizable chemicals or constituents for which there is substantial evidence

of health impact and developing statements that explain those effects, e.g., “cigarettes contain cyanide, a chemical used in rat poison” or “cigarettes contain benzene, which is known to cause cancer.” This would be more likely to resonate with smokers than a long list of nitrosamines compounds most people know little or nothing about.

It is especially important to use simple, clear language to reach across a wide spectrum of demographic groups, especially the young, since most smokers start to smoke in early adolescence.³ We recommend constructing statements that can be understood among consumers who read at a 5th grade level.

Furthermore, all statements and content should be message-tested among the target audiences, as best practice protocols suggest,^{6,7} before spending is initiated on printing or producing materials, especially if large amounts of money are to be used, for instance for a mass media campaign using television.

Making the Full List Accessible to the Public

We recommend making the full list of ingredients available on the FDA website. Each ingredient could be accompanied by information about health impacts, e.g., whether the substance is a known human carcinogen or is harmful to human or animal health, based on *inclusive* chemical data sets as suggested by TPSAC.

For context, it would also be useful to list other products the chemical is used in, such as gasoline or detergent, as well as diseases or conditions, the substance has been linked to, such as leukemia or heart disease.

Avoid Comparisons and Industry Marketing

Comparisons between brands may unintentionally mislead consumers to conclude that a brand containing fewer chemicals is safer. A disclaimer could be included with published lists, explaining that a shorter list of chemicals found in one brand does not connote a safer product.

In addition, tobacco companies should not be allowed to use confusing marketing terms about ingredients and constituents, such as “all natural” or “no additives” which have been shown to confused the public in the past.^{8,9}

Perhaps most importantly any discussion of the ingredients and components of tobacco products should not lose sight of the critical point that tobacco itself is an addictive product that kills up to one in two long-term users worldwide.¹⁰ In the United States that includes not only 400,000 smokers each year but another 40,000 exposed to tobacco smoke.¹¹

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