Protecting Children from Environmental Tobacco Smoke In the Home

by

Janice Comer Bradley

B.S., University of Dayton, 1984

Thesis

Submitted in partial fulfillment of the requirements for the
Degree of Master of Arts in the
Center for Environmental Studies at
Brown University

ABSTRACT

This thesis focuses on the effects that exposure to tobacco smoke has on children in their home environment. Children represent a particularly vulnerable population because they do not control their environment and are potential innocent victims of thoughtless adult behavior. Environmental tobacco smoke (ETS) is recognized as a major public health concern and a preventable health hazard for children.

I present medical evidence that supports the causal relationship between exposure to ETS and harmful health effects in children, ranging from mucus membrane irritation to infections of the middle ear, lungs, throat and Sudden Infant Death Syndrome(SIDS). Exposure to ETS worsens the symptoms of asthma and other respiratory illnesses and is implicated in slowing child development. I also discuss private and public initiatives at the federal, state and local level to control tobacco smoke exposure.

I explore two options to protect children from ETS exposure in the home. We control exposure to other hazardous substances by regulation. I evaluate the difficulties that may be encountered when attempting to control the use of a legal product in one's own home through regulation. I conclude that parents may be more willing to change voluntarily to protect their children than if their smoking behavior around their children was restricted by law. I therefore propose to educate parents on the risks associated with exposing their children to ETS.

This education program begins by recognizing that tobacco use is an addictive behavior and individuals engaging in that behavior must be educated on the risk to themselves, others and the environment. I propose a pilot study to test the hypothesis that parents whose children are being monitored will change their behavior to reduce the risk to their children if they are given education and encouragement to do so.

This pilot program will identify the children who are exposed to ETS by testing their blood for levels of cotinine, a metabolite of nicotine. Cotinine testing will coincide with a current Rhode Island program that mandates screening blood for lead concentration for children 9 months to six years. Exposure to ETS can be determined by analyzing for cotinine in the lead blood sample without subjecting the child to another invasive or traumatic procedure and establish a starting point for efforts to reduce exposure through parental education. The pilot program can confirm or refute the value of educational intervention in reducing ETS exposure in children.