

The Social Determinants of Health through the Lens of Politics: Smoke-Free Environments

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Introduction

The main objective of our project is to raise awareness of the dangers of secondhand smoke and urge communities that have not already done so to pass smoke-free ordinances. As part of the Presidential Scholars this year, we represent students from all of the colleges in MUSC and provide a unique perspective on the dangers of smoke exposure from our various professions.



While exposure to secondhand smoke in public and work areas is a significant health concern on the global scale as well as on a national and state level, we chose to start making a difference in the local community. With our community liaison, Dan Carrigan of Smoke Free Action Network, we are urging the town of North Charleston and Charleston County to pass smoke-free ordinances.

Background

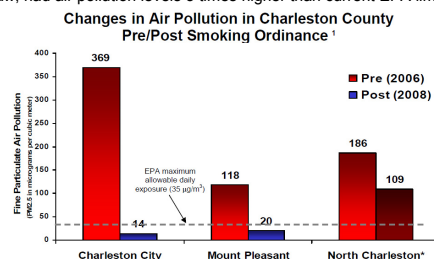
Research that encouraged and supported our passion for the passage of smoke-free ordinances:

The Pueblo Study¹ – For three years, researchers followed the effects of a city wide smoke-free ordinance initiated in 2003 in the city of Pueblo, Colorado. The study showed that the number of heart attack patients decreased by 41% after the ban was initiated. The Pueblo study is an optimal example of health benefits achieved due to smoke-free environments.

Kids exposed to secondhand smoke at home	240,000
Adult nonsmokers who die each year from exposure to secondhand smoke	400 to 1,120
Annual health care costs in SC directly caused by smoking	\$1.09 billion
Smoking-caused productivity losses in SC	\$1.83 billion
SC State Tobacco Tax	7 cents/pack
SC Ranking for Tobacco Prevention Spending	51st

South Carolina Smoking Related Statistics² – As shown in Table 1, many children are exposed to secondhand smoke every year, and smoke-free ordinances may help decrease the number exposed. In addition, our state spends over a billion dollars every year in healthcare costs due to smoking, and we have the lowest tobacco tax in the nation. South Carolina ranks 51st in the nation for the amount of money spent on tobacco prevention.

MUSC Hollings Cancer Center Air Quality Study³ – An air quality study conducted by Hollings Cancer Center showed a 94% improvement in air quality in Charleston and Mt. Pleasant after the adoption of smoke-free laws. North Charleston, which does not have a smoke-free law, had air pollution levels 3 times higher than current EPA limits.



Methods

We conducted an extensive literature review to better understand the health aspects of secondhand smoke on various populations. Some major studies referenced and described in more detail in the background include The Pueblo Study, the MUSC Hollings Cancer Center Air Quality Study, and state specific tobacco related statistics.

During January 10-17, 2009, we conducted a phone survey with local bars and restaurants currently in areas with a public smoking ban. In most cases we were able to talk directly to the managers. We told each manager that we were conducting a survey about the effects of the smoke-free ordinance on local businesses and asked them to give us a statement on how it affected their business. We successfully contacted 15 bars and restaurants. 12 of the bars were located within the City of Charleston which has had the smoke-free ordinance in place since July 23, 2007. Two bars were located on Sullivan's Island, which had the smoke-free ordinance in place since June 2006. One bar was located on Isle of the Palms which had the smoke-free ordinance in place since January 1, 2009.

Using all of this collected information, our interdisciplinary group of Presidential Scholars drafted a letter to the editor urging the community to consider adopting smoke-free ordinances. We particularly focused on the town of North Charleston as well as Charleston county since these local areas have yet to adopt a smoke-free ordinance. This editorial letter was sent to *The Post and Courier*, *The Charleston City Paper*, *Goose Creek Gazette*, *Charleston Mercury*, and *Moultrie News* for pending publication.



Results

Editorial Letter to *The Post and Courier*

Written by the MUSC Presidential Scholars Smoke-Free Environment Group

The harmful effects of smoking on health are widely known and have been publicized for years. Each year South Carolina spends \$1.9 billion in healthcare costs directly related to smoking. However, this staggering statistic overshadows a less-known killer—secondhand smoke. The 2006 Surgeon General's report states that "exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer." According to the Center of Disease Control (CDC), secondhand smoke causes an estimated 46,000 heart disease deaths and 3,000 cases of lung cancer per year among *non-smokers*.

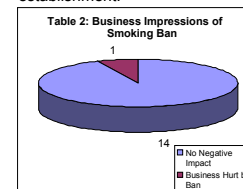
As future healthcare providers, we are concerned about the health of our communities. Known as the Presidential Scholars of MUSC, our group consists of faculty and future pharmacists, doctors, physician assistants, researchers, dentists, and nurses. The goal of our group is to collaborate on pertinent community issues to make a positive impact on the health of our local community. Given the alarming statistics of the harmful effects of secondhand smoke, we strongly urge the City of North Charleston to follow the lead of other Lowcountry cities and pass smoke-free legislation. With recent support of innovative projects throughout the city, North Charleston has shown great regard for improving the lives of citizens, and a city-wide smoke-free law should be next.

Recently, researchers at MUSC Hollings Cancer Center studied air quality in 44 bars and restaurants in Charleston, Mount Pleasant, and North Charleston, before and after smoke-free ordinances were adopted. Results showed a 94% improvement of air quality in Charleston and Mt. Pleasant after the adoption of smoke-free laws. In short, this means the air is safe and healthy, according to the Environmental and Protection Agency (EPA). However, air quality in North Charleston bars and restaurants did not significantly change and the amount of particulate matter in the air remains three times higher than the current EPA limits. This shows that smoke-free legislation is effective in reducing air pollution and that employees and patrons of local establishments can benefit from smoke free laws. Though local opponents to smoke-free laws argue that these laws hurt local businesses, most Charleston and Mount Pleasant businesses that were surveyed reported that the smoke-free laws had no negative effects on their business.

Overwhelming scientific data shows that environmental tobacco smoke damages the health of all who are intentionally or accidentally exposed, and communities should take bold steps to protect the health of their people. Because we believe that our Lowcountry should be a leader in our nation's standard of living, this group of future healthcare professionals recommends that a strong and comprehensive smoke-free law must be put in place in North Charleston.

Results Continued

The results of the conducted phone survey as shown in Table 2 are that 14 out of 15 businesses stated that the smoke-free laws already in place had no negative impact on their establishment.



A sampling of comments from business owners contacted in this survey:

"We were the first municipality to go no smoking. We have had it for a couple of years now. I would say the effect has been negligible, maybe a little bit in the beginning, but it has not effected my business at all."

"[The ban] has not effected us at all. We have two patios where people can smoke outside."

Discussion

Collaboration on community issues is the goal of the Presidential Scholars Program. Our project was greatly enhanced by the interdisciplinary focus. Using the varied experiences and insight from a diverse group of professionals with valuable input from community activists, this group was able to research and act on a pertinent community topic. Using this experience we plan to lead future interprofessional efforts to effect change in our communities. These efforts focus on protection of the health and well-being of all community members—the overriding goal of the health professions.

The efforts for adoption of a smoke-free ordinance in North Charleston were slowed at the May 14, 2008 city council meeting when a unexpected vote blocked the efforts of the Smoke Free Action Network and city constituents. This vote was not originally on the council agenda and was presented to the council on late notice. Therefore, smoke-free activists were not in attendance and thus the vote to deny the smoke-free ordinance passed by a large majority of members. This surprise tactic has been used in other municipalities as an apparent strategy to hinder the progress of the smoke-free ordinances, despite overwhelming evidence of the harmful effects of second-hand smoke exposure. Though this vote temporarily set back the efforts of the smoke-free ordinance supporters, their work will not stop until North Charleston residents are free to shop, eat, and work in smoke-free environments.



References

- Bartecchi C, Alsever RN, Nevin-Woods C, et al. Reduction in the Incidence of Acute Myocardial Infarction Associated With a Citywide Smoking Ordinance. *Circulation*. 2006;114:1490-1496.
- The Toll of Tobacco in South Carolina. November 17, 2008. <http://www.tobaccofreekids.org/reports/settlements/state.php?StateID=SC>.
- Carter CL, Carpenter MJ, Higbee C, et al. Fine particulate air pollution in restaurants and bars according to smoking policy in Charleston, South Carolina. *Journal of the South Carolina Medical Association*. 2008;104(4):82-5.

Acknowledgements

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¹ Based on venues that allowed smoking in 2005
² A smoking ordinance was NOT initiated in North Charleston