

SHS Smoke Exposure in Alexandria Bars – Pre & Post Ordinance

January 2013

Introduction

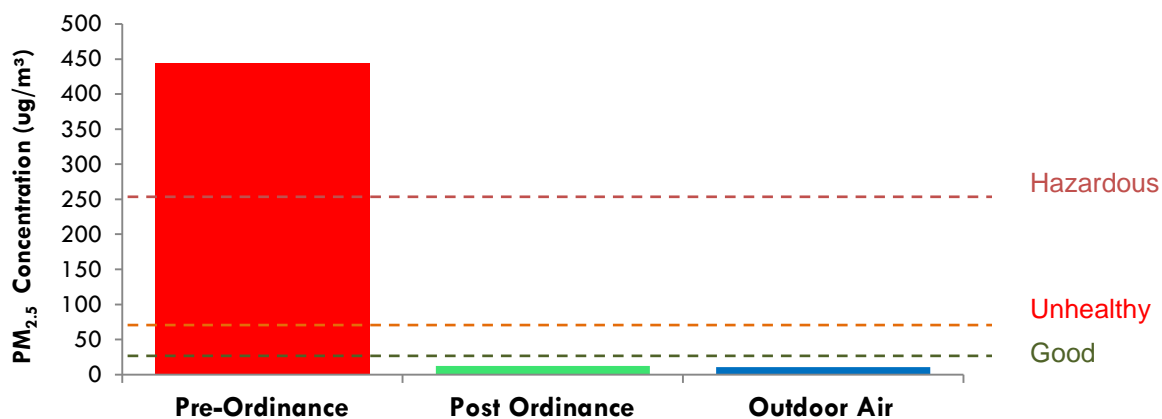
- This evaluation assessed the impact of environmental tobacco smoke on indoor air quality in
- Alexandria, Louisiana.
- To assess indoor air quality, indoor air pollution levels in 17 smoking bars and gaming facilities in Alexandria were measured before the local smoke-free ordinance was implemented on January 1, 2012. This data was then compared with the air pollution levels in 12 of the same 17 bars and gaming facilities *after* the smoke-free ordinance.

Methodology

- Secondhand tobacco smoke is comprised of an abundance of very small particles, often measured as particulate matter less than 2.5 microns in size or PM_{2.5}. This evaluation took real-time measurements of PM_{2.5} using a direct reading instrument.
- Pre-ordinance air monitoring of 17 sites was conducted in January, February, and December 2011. Post-ordinance air monitoring of 12 sites was conducted on January 6, 2012 (less than one week after enactment of the ordinance)

Results

- **Pre-ordinance:** On average, the sample of 17 Alexandria smoking bars and gaming facilities assessed before the ordinance went into effect had **hazardous** air quality (PM_{2.5} = 444.5 µg/m³), according to U.S. Environmental Protection Agency (USEPA) standards. The health effects associated with this level of exposure include:
 - Significant aggravation of heart or lung disease and premature mortality among the elderly and individuals with cardiopulmonary disease.
 - Serious risk of respiratory effects within the general population.
- **Post-ordinance:** On average, the sample of 12 bars and gaming facilities after the ordinance went into effect had **good** air quality (PM_{2.5} = 12.3 µg/m³), which was comparable to the quality of outdoor air (10.3 µg/m³).



Conclusions

- After the ordinance went into effect, bars and gaming facilities surveyed had an average of 97% reduction in PM_{2.5} levels, and indoor air in bars and gaming facilities was **36 times cleaner** post-ordinance.
- This evaluation demonstrates that implementing local smoke-free ordinances in other Louisiana cities may have a similar and beneficial effect on indoor air quality levels of bars and gaming facilities.