

Secondhand Smoke Exposure Levels in Youth Venues in Thailand and Malaysia

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Background

- The exposure level of secondhand smoke is known to be high in bars, clubs, nightclubs and discos frequented by young people in Thailand and Malaysia
- Yet, the actual exposure levels of secondhand smoke in these public places have never been measured and compared to standards of air quality or even other public places where smoking occurs

Free Gifts with Dance Party Tickets



Purpose

- To collect secondhand smoke exposure data from bars, nightclubs and discos using a standard protocol and equipment to determine if the levels found pose any health threat to workers or patrons
- To compare the secondhand smoke exposure levels found in Thailand and Malaysia to see what the differences are and show in the two countries

Method

- A multi-country protocol prepared by research partners at Roswell Park Cancer Center was used to collect and analyze the data
- The sample was a purposive sample of youth venues selected in two localities in each country with an emphasis on venues with clear youth appeal and patronage
- Samples were collected by young field researchers trained in the use of the real-time air quality monitor and field sampling data report forms. Analysis was completed using the standard protocol.
- Acknowledgement: Funding from the US National Cancer Institute/NIH, P50CA111236, and the Flight Attendant Medical Research Foundation (FAMRI).

Measuring Particulates Indicative of Secondhand Smoke Exposure

- ***PM2.5 is the concentration of particulate matter in the air smaller than 2.5 microns in diameter. Particles of this size are released in significant amounts from burning cigarettes, are easily inhaled deep into the lungs, and are associated with pulmonary and cardiovascular disease and mortality***
- **Unobtrusive sampling in each public place for at least 30 minutes**
- **PM 2.5 Air Monitoring Instrument**

TSI SidePak AM510 Personal Aerosol Monitor



US EPA Air Quality Index

Air Quality	Air Quality Index	PM _{2.5} (µg/m ³)	Health Advisory
Good	0-50	≤15	None.
Moderate	51-100	16-40	Unusually sensitive people should consider reducing prolonged or heavy exertion.
Unhealthy for Sensitive Groups	101-150	41-65	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.
Unhealthy	151-200	66-150	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
Very Unhealthy	201-300	151-250	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
Hazardous	≥301	≥251	People with heart or lung disease, older adults, and children should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

Conclusion

- Secondhand smoke exposure levels in youth venues in Thailand and Malaysia are significantly higher when compared to other public entertainment venues that allow smoking
- These levels are 35 times the annual exposure standard and 15 times the proposed 24 hour exposure standard of the US EPA. These levels are very dangerous to the short term health of vulnerable populations and will also likely produce long term health consequences based on known respiratory and heart health risks

Implications

- Pubs, bars, discos and nightclubs catering to youth clearly have higher smoking activity as measured by secondhand smoke exposure levels. The dangers from secondhand smoke in these venues is extreme, calling attention to the obvious harm that is being perpetuated in these public places. These results call for action to prevent future acute and long-term exposures in these entertainment venues.