

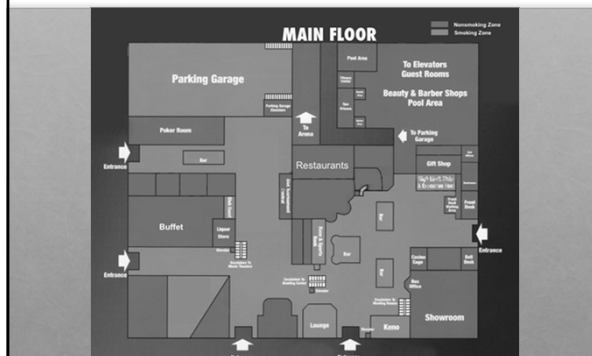
RISK OF EXPOSURE TO SECOND HAND SMOKE FOR CHILDREN IN LAS VEGAS NEIGHBORHOOD CASINOS

Chris Cochran PhD, UNLV School of Community Health Sciences, Dominic Henriques, Nancy York PhD, Kiyoung Lee MPH

NEVADA CLEAN INDOOR AIR ACT

- Enacted in 2006, NRS 202
- Prohibited smoking in many indoor, public places
- Termed a “partial” or “non-comprehensive” indoor air act
- Venues excluded from indoor smoking ban:
 - Casino gaming areas, standalone bars and taverns, strip clubs and brothels, and tobacco stores

EXAMPLE CASINO LAYOUT



PURPOSE OF STUDY

- To evaluate the effectiveness of the NCIAA by measuring air quality in nonsmoking, children-friendly venues within casinos and compare these measurements to nearby gaming areas
- Hypotheses:
 - Second hand smoke levels in gaming areas will tend to positively correlate with nonsmoking children zones
 - Current regulations fail to protect children from harmful SHS exposure as defined by EPA exposure guidelines

SAMPLING

- Selection Criteria:
 - Local, neighborhood casinos
 - Must overtly cater to children by offering a bowling alley, cinema, arcade, or some other children-friendly venue
- Total Sample 15 Las Vegas “locals’ casinos” (strip corridor casinos not measured)

MEASUREMENT

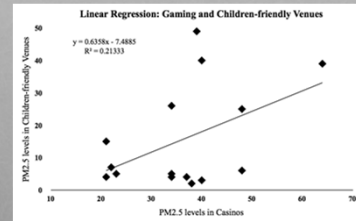
- Air quality was assessed by measuring Particulate Matter 2.5 microns (PM 2.5) with a SidePak personal aerosol monitor
- PM 2.5 is a validated surrogate measure of SHS
- Observer collected air measures at 3-5 feet from floor level to reflect children’s height



DESIGN

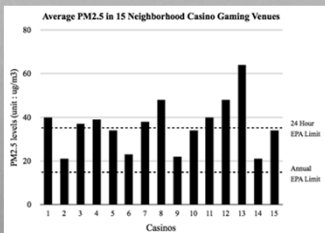
- Data collection consisted of outside air baseline measures, then 30 min. in gaming areas, followed by 30 min. in children-friendly (non-smoking) venues
- Data collection times were between 1:30 pm and 10 pm, on Friday, Saturday, and Sunday evenings
- Observer maintained a covert status, engaging in typical patron behaviors to avoid proprietary resistance

RESULTS



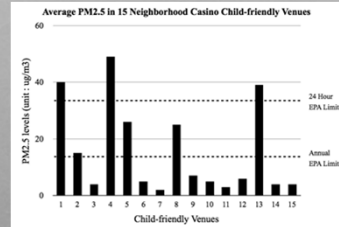
PM 2.5 levels (g/sq. m) in gaming and children-friendly venues were positively correlated

RESULTS



Eight gaming venues exceeded the EPA's 24 hour exposure limit for PM 2.5, and every gaming venue exceeded the EPA's annual exposure limit

RESULTS



Six children-friendly venues exceeded the EPA's annual exposure limit for PM 2.5, and three venues exceeded the EPA's 24 hour exposure limit

CONCLUSION

- Partial smoke free policy fails to preserve the air quality in settings that have a combination of smoking and nonsmoking areas
- Children visiting neighborhood casinos in Las Vegas are exposed to harmful levels of second hand smoke, even in nonsmoking zones
- Casino workers are repeatedly exposed to very dangerous levels of second hand smoke

POLICY IMPLICATIONS

- Current NCIAA regulations do not adequately preserve air quality for children in casinos, particularly if adopting Surgeon General's guidelines that no level of 2nd hand smoke exposure is safe exposure
- The American Society of Heating, Refrigerating, and Air Conditioning Engineers has determined that no air purification can eliminate the carcinogens in SHS
- Comprehensive smoke free policy is the only sure-fire remedy to ensure safe indoor air levels