

# The Risks of Secondhand Smoke in Casinos



Secondhand smoke (SHS) is an occupational hazard for many casino workers- from dealers to security. Job-related exposure to SHS is a significant, but entirely preventable, cause of premature death among U.S. workers.<sup>i, ii, iii</sup> While 25 states, D.C., Puerto Rico, and the U.S. Virgin Islands have 100 percent smoke-free laws covering all workplaces, restaurants, and bars, only 21 states, Puerto Rico, and the U.S. Virgin Islands require state-regulated gaming facilities to be 100 percent smoke-free.<sup>iv</sup> ACS CAN urges policymakers and community leaders to pass laws and policies that make all gaming facilities 100 percent smoke-free.

Only 21 states require state-regulated gaming facilities to be 100 percent smoke-free.

## Secondhand Smoke: Risking Workers' Health

Casino workers are at higher risk for SHS-related illness than other workers:

- The National Institute of Occupational Health and Safety (NIOSH) and the US Surgeon General found that occupational exposure to SHS increases workers' risk of lung cancer and other diseases.<sup>v, vi, vii</sup>
- Nicotine concentrations in the air in casinos, bars, billiard halls, bowling alleys, and bingo parlors were found to be 2.4-18.5 times higher than in offices or residences, and 1.5-11.7 times higher than in restaurants.<sup>viii</sup> Another study found that smoke particles were approximately 12 times greater inside casinos than outside.<sup>ix</sup>
- A study examining casino dealers' occupational exposure to SHS in three casinos found that they were exposed to nicotine and a number of toxins – including carcinogens<sup>x</sup> benzene, naphthalene, formaldehyde, and acetaldehyde.<sup>xi</sup>
- Patrons were also found to have significantly elevated levels of a tobacco-specific lung carcinogen after a four-hour visit to a casino that allowed smoking.<sup>xii</sup>
- SHS and unsafe levels of smoke-related pollutants have been found throughout the entire casino gaming area, suggesting that casino patrons as well as other casino employees (e.g. servers, cashiers, security personnel) may incur the same level of SHS exposure as dealers and supervisors.<sup>xiv</sup> A study examining levels of SHS in 21 Nevada casinos with non-smoking restaurants adjacent to gaming areas where smoking was allowed found that the non-smoking areas still had an average of 60 percent of the amount of SHS as the areas where smoking was allowed.<sup>xv</sup>
- A study on the impact of SHS in Pennsylvania casinos found that exposure causes five times as many premature deaths as Pennsylvania mining disasters.<sup>xvi</sup>

"The cigarette smoke in the casinos was hurting me so badly that I was struggling to breathe." – *Alecia Sibio, Former Casino Worker*<sup>xiii</sup>

## Improving Workers' Health

Smoke-free casino laws reduce exposure to SHS and improve the health of casino workers and patrons:

- NIOSH and the Surgeon General recommend that ALL workers be protected from involuntary exposure to SHS.<sup>xvii, xviii</sup>
- Research has shown that smoke-free policies reduce workers' long-term risk of lung cancer and cardiovascular disease.<sup>xix, xx, xxi, xxii, xxiii, xxiv</sup>
- Comprehensive smoke-free policies also reduce the risk of hospitalizations and death from heart, stroke, and lung diseases.<sup>xxv</sup> More comprehensive smoke-free laws had an even greater impact on risk of disease and death.

- A study comparing SHS particulate levels in 66 U.S. casinos where smoking is allowed with three non-smoking casinos found that the smoke-free casinos had, on average, 94 percent lower levels of SHS particulate.<sup>xxvi</sup> In about half of the smoking casinos, the SHS levels exceeded a level known to increase cardiovascular risk in nonsmokers after less than 2 hours of exposure, posing acute health risks for patrons and workers. In casinos with a non-smoking section, the ventilation and separation systems were unable to remove the majority of the SHS that a comprehensive smoke-free law removed.<sup>xxvii</sup>
- Another recent study found a 19.1 percent decrease in ambulance calls originating from Colorado casinos as a result of the extension of smoke-free laws to casinos.<sup>xxviii</sup>

## Improving the Bottom Line

Smoke-free casino laws are popular and good for business.

- There is strong public support for making casinos smoke-free. Three years after the implementation of Iowa's smoke-free law, 63 percent of voters supported expanding the smoke-free law to casinos.<sup>xxix</sup> More than 70 percent of New Jersey voters supported extending the statewide Smoke-Free Air Act to cover casino gaming floors in 2007. In Southern California, more than 85 percent of gaming customers surveyed in Indian casinos stated that they would prefer a smoke free environment.<sup>xxx</sup>
- When smoking is allowed in the workplace, business owners increase their costs of doing business. Employers pay increased health, life, and fire insurance premiums, make higher workers' compensation payments, incur higher worker absenteeism, and settle for lower worker productivity.<sup>xxxi, xxxii, xxxiii, xxxiv, xxxv, xxxvi, xxxvii, xxxviii</sup>
- Employees who smoke have significantly higher absentee, injury, accident, and disciplinary rates than their nonsmoking colleagues.<sup>xxxix, xl, xli, xlii</sup>
- Studies on the impact of smoke-free gaming laws in Delaware and Kentucky showed that the laws had no effect on total gaming revenue.<sup>xliii, xliv</sup>
- A Massachusetts study found that 100 percent smoke-free ordinances did not negatively affect profits from bingo and other gambling sponsored by charitable organizations.<sup>xlv</sup>

### References

- <sup>i</sup> National Cancer Institute (NCI) (1999). *Health Effects of Exposure to Environmental Tobacco Smoke: The Report of the California Environmental Protection Agency. Smoking and Tobacco Control Monograph 10*. Bethesda, MD: NCI. NCI (1999).
- <sup>ii</sup> U.S. Department of Health and Human Services (HHS) (2014). *The Health Consequences of Smoking—50 Years of Progress: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Center for Diseases Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.
- <sup>iii</sup> Shopland DR, Anderson CM, Burns DM, and Gerlach KK (2004). Disparities in smoke-free workplaces among food service workers. *Journal of Occupational and Environmental Medicine (JOEM)* 46(4): 347-356.
- <sup>iv</sup> American Nonsmokers' Rights Foundation. Overview List – How Many Smokefree Laws? Updated July 3, 2017. Available at <http://no-smoke.org/pdf/mediaordlist.pdf>
- <sup>v</sup> Trout D, Decker J, Mueller C, Bernert JT, and Pirkle J (1998). Exposure of Casino Employees to Environmental Tobacco Smoke. *JOEM* 40(3): 270-276.
- <sup>vi</sup> HHS (2014).
- <sup>vii</sup> Achutan C, West C, Mueller C., Boudreau Y, and Mead K (2009). *Environmental and Biological Assessment of Environmental Tobacco Smoke Exposure Among Casino Dealers*. National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Available online at <http://www.cdc.gov/niosh/hhe/reports/pdfs/2005-0201-3080.pdf>
- <sup>viii</sup> Siegel M and Skeer M (2003). Exposure to Secondhand Smoke and Excess Lung Cancer Mortality Risk Among Workers in the "5 B's": Bars, Bowling Alleys, Billiard Halls, Betting Establishments, and Bingo Parlours. *Tobacco Control* 12: 333-338.
- <sup>ix</sup> Babb S, et al. (2014). Secondhand smoke and smoking restrictions in casinos: a review of the evidence. *Tob Control*. Available online at <http://tobaccocontrol.bmj.com/content/early/2014/03/07/tobaccocontrol-2013-051368.full>.
- <sup>x</sup> American Cancer Society (2011). *Known and Probable Human Carcinogens*. Available at <http://www.cancer.org/Cancer/CancerCauses/OtherCarcinogens/GeneralInformationaboutCarcinogens/known-and-probable-human-carcinogens>. Accessed September 12, 2011.
- <sup>xi</sup> Achutan C, West C, Mueller C, et al (2011). Environmental Tobacco Smoke Exposure Among Casino Dealers. *Journal of Occupational and Environmental Medicine* 53(4): 346-251.

- <sup>xii</sup> Anderson KE, Kliris J, Murphy L, et al (2003). Metabolites of a Tobacco-Specific Lung Carcinogen in Nonsmoking Casino Patrons. *Cancer Epidemiol Biomarkers Prev* 12(12):1544-6.
- <sup>xiii</sup> Americans for Nonsmokers' Rights. Smokefree Casinos. <https://nonsmokersrights.org/smokefree-casinos>
- <sup>xiv</sup> Babb S, et al. (2014).
- <sup>xv</sup> Repace JL, Jiang RT, Acevedo-Bolton V, et al. (2011). Fine particle air pollution and secondhand smoke exposures and risks inside 66 US casinos. *Environmental Res*; 111(4): 473-84.
- <sup>xvi</sup> Repace JL (2009). Secondhand Smoke in Pennsylvania Casinos: A Study of Nonsmokers' Exposure, Dose, and Risk. *Am J Public Health*. 2009; 99(8): 1478-1485.
- <sup>xvii</sup> Achutan C, West C, Mueller C., Boudreau Y, and Mead K (2009).
- <sup>xviii</sup> HHS (2014).
- <sup>xix</sup> NCI (1999).
- <sup>xx</sup> Sargent RP, Shepard RM, Glantz, S.A. (2004). Reduced Incidence of Admissions for Myocardial Infarction Associated with Public Smoking Ban: Before and After Study. *British Medical Journal* 328: 977-980.
- <sup>xxi</sup> Bartecchi C, Alsever RN, Nevin-Woods C, Thomas WM, Estacio RO, Bucher-Bartelson B, and Krantz MJ (2005). *A Reduction in the Incidence of Acute Myocardial Infarction Associated with a Citywide Smoking Ordinance*. Paper presented at the 2005 American Heart Association Scientific Sessions.
- <sup>xxii</sup> Stefanadis C, Vlachopoulos C, Tsiamis E, Diamantopoulos L, Toutouzas K, Giatrakos N, et al. (1998). Unfavorable Effects of Passive Smoking on Aortic Function in Men. *Annals of Internal Medicine* 128 (6): 426-434.
- <sup>xxiii</sup> Davis, R.M. (1998). Exposure to Environmental Tobacco Smoke: Identifying and Protecting Those at Risk. *JAMA* 280(22): 1947-1949.
- <sup>xxiv</sup> HHS (2014).
- <sup>xxv</sup> Tan CE and Glantz SA. (2012) Association between smoke-free legislation and hospitalizations for cardiac, cerebrovascular, and respiratory diseases: a meta-analysis. *Circulation*; 126: 2177-2183.
- <sup>xxvi</sup> Repace et al (2011).
- <sup>xxvii</sup> Repace et al (2011).
- <sup>xxviii</sup> Glantz, S and Gibbs E (2013). Changes in ambulance calls after implementation of a smoke-free law and its extension to casinos. *Circulation* 2013;128(8):811-3.
- <sup>xxix</sup> Selzer & Company on behalf of the Iowa Tobacco Prevention Alliance. (2011). Available at <http://www.iowatpa.org/Resources/Documents/ITPA%20Survey%20Key%20Findings%20Feb%202011.pdf>. Accessed June 6, 2011.
- <sup>xxx</sup> Americans for Nonsmokers' Rights Foundation (2007). Secondhand Smoke and Gaming Facilities. Available online at <http://www.no-smoke.org/pdf/shsandcasinos.pdf>.
- <sup>xxxi</sup> Kristein MM (1983). How Much Can Business Expect to Profit from Smoking Cessation? *Preventive Medicine*. 12: 358-381.
- <sup>xxxii</sup> Marion Merrell Dow, Inc. (1991). The Economic Impact of Smoking: In the Workplace; On Cardiovascular Health; On Wound Health and Recovery from Surgery; On Infants and Children; On Pulmonary Health; On Dental and Oral Health. Medical Information Services, Inc.
- <sup>xxxiii</sup> HHS, CDC, Office of Smoking and Health (OSH), Wellness Councils of America, American Cancer Society (1996). *Making Your Workplace Smokefree: A Decision Maker's Guide*. Available online at [http://www.cdc.gov/tobacco/research\\_data/environmental/fullguide.pdf](http://www.cdc.gov/tobacco/research_data/environmental/fullguide.pdf).
- <sup>xxxiv</sup> Musich S, Napier D, and Edington DW (2001). The Association of Health Risks With Workers' Compensation Costs. *Journal of Occupational and Environmental Medicine* 43(6): 534-541.
- <sup>xxxv</sup> Halpern MT, Shikar R, Rentz AM, and Khan ZM (2001). Impact of Smoking Status on Workplace Absenteeism and Productivity. *Tobacco Control* 10:233-238.
- <sup>xxxvi</sup> Ryan J, Zwerling C, and Orav ED (1992). Occupational Risks Associated with Cigarette Smoking: A Prospective Study. *American Journal of Public Health* 82(1): 29-32.
- <sup>xxxvii</sup> Ryan J, Zwerling C, and Jones M (1996). Cigarette Smoking at Hire as a Predictor of Employment Outcome. *JOEM* 38(9): 928-933.
- <sup>xxxviii</sup> Penner M and Penner S (1990). Excess Insured Health Care Costs from Tobacco-Using Employees in a Large Group Plan. *JOEM* 32(6): 521-523.
- <sup>xxxix</sup> Halpern (2001).
- <sup>xl</sup> Ryan J et al. (1992).
- <sup>xli</sup> Ryan J et al. (1996).
- <sup>xlii</sup> Penner M and Penner S (1990).
- <sup>xliii</sup> Mandel, L.L., Alamar, B.C., and Glantz, S.A. (2005). Smoke-Free Law Did Not Affect Revenue from Gaming in Delaware. *Tobacco Control* 14: 10-12
- <sup>xliv</sup> Pyles MK and Hahn EJ (2009). Smokefree Legislation and Charitable Gaming in Kentucky. *Tobacco Control*; 18: 60-62.
- <sup>xliv</sup> Glantz SA and Wilson-Loots R (2003). No Association of Smoke-Free Ordinances with Profits from Bingo and Charitable Games in Massachusetts. *Tobacco Control* 12: 411-413.