#### **Supplemental Digital Content**

#### **TABLE 4: ALCOHOL OUTLET DENSITY**

| **Construct** | **Indicators[[1]](#endnote-1)** | **Data Source** |
| --- | --- | --- |
| Alcohol availability78 | Counts of business types that allow alcohol sales (aggregated by zip codes) per 10,000 residents | NAICS codes in Economic Census & Distilled Spirits Council of the United States (DISCUS) |
| Alcohol availability79, 80 | Total number of alcohol outlets per 1,000 census tract population | State Licensing Bureau or State Alcoholic Beverage Commission data |
| Alcohol availability81 | The number of stores and bars selling alcohol (not including restaurants) per 100,000 population | ZIP Code Business Patterns data from U.S. Census Bureau & U.S. Department of Commerce |
| Alcohol outlet density82 | Count of alcohol outlets by category (package store, grocery store, on-premise except liquor) and overall number of outlets | Alcohol Beverage Regulation Administration (ABRA) |
| Alcohol outlet density83 | Total count of on-premise and off-premise alcohol outlets per square mile within a census block (excluding airports, distilleries, large-scale distributors and sacramental wine vendors) | State Liquor Control Board |
| Alcohol outlet density84 | The number of alcohol outlets by census block group, total counts and separate calculations for restaurants that sold only wine and malt alcohol, restaurants that sold all types of alcohol, package alcohol outlets, and all other types of outlets | State Alcohol Beverage Control Commission |
| Alcohol outlet density85 | The number of restaurants, bars and off premise establishments per square mile within each ZIP code in each year | State Department of Alcohol Beverage Control |
| Alcohol outlet density86 | The number of off-premise alcohol outlets (liquor stores and vendors that sell alcohol for consumption elsewhere) and on-premise outlets (establishments such as restaurants or bars where alcohol is typically purchased and consumed onsite) divided by the total population size for each zip code based on 1990 US Census estimates to create a density measure per 10,000 persons | North American Industry Classification System (NAICS) codes in U.S. Census |
| Alcohol outlet density87 | The number of beer, wine and liquor stores divided by total population | U.S. Census of Economic Activity |
| Alcohol outlet density88, 89 | Rates of alcohol outlets per 100 population per census tract (excluding wholesale distributors and manufacturers) | City Office of Liquor Control or State Alcoholic Beverage Commission |
| Alcohol outlet density90 | The density of businesses (50 per 1,000 people in the county) with licenses to sell alcohol (excluding caterers and wholesalers) disaggregated by census tract | State Department of Labor and Economic Growth |
| Liquor store density91 | The number of liquor stores per 10K population | County Health Rankings data |
| Alcohol outlet density92 | The size of the block group in square miles for all alcohol outlet variables (restaurant, store, tavern, nightclub, hotel & multipurpose facilities excluding caterers and wholesalers) coded as on premise or off premise (stores only) | The Alcoholic Beverage Regulation Administration (ABRA) |
| Alcohol outlet density93 | The number of businesses licensed for on-premises alcohol consumption (e.g., bars, taverns and nightclubs); off-premises consumption (e.g., packaged alcohol); and full-service restaurants per 10,000 people | U.S. Census |
| Alcohol outlet density94 | Count of off-campus alcohol outlets within the 3-mile boundary of college campus divided by the 4-year mean for the total student population (both undergraduate and graduate) and then multiplied by 1,000 to yield densities per 1,000 students | State Alcoholic Beverage Control or Alcohol Licensing Agency & observational data |
| Alcohol outlet density95 | Total numbers of alcohol outlets by outlet type for each census tract divided by (1) census tract square miles and (2) total census tract roadway miles and calculated as total outlet density, on sale outlet density, and (3) off sale outlet density | State Alcohol and Tobacco Control (ATC) office |

78. McKinney CM, Chartier KG, Caetano R, Harris TR. Alcohol availability and neighborhood poverty and their relationship to binge drinking and related problems among drinkers in committed relationships. Journal of Interpersonal Violence. 2012;27:2703-27.

79. Nielsen AL, Martinez R, Jr., Lee MT. Alcohol, Ethnicity, and Violence: The Role of Alcohol Availability for Latino and Black Aggravated Assaults and Robberies. The Sociological Quarterly. 2005;46:479-502.

80. Sparks CS. Violent crime in San Antonio, Texas: an application of spatial epidemiological methods. Spatial and Spatio-Temporal Epidemiology. 2011;2:301-9.

81. Stockdale SE, Wells KB, Tang L, Belin TR, Zhang L, Sherbourne CD. The importance of social context: Neighborhood stressors, stress-buffering mechanisms, and alcohol, drug, and mental health disorders. Social Science and Medicine. 2007;65:1867-81.

82. Franklin FA, Laveist TA, Webster DW, Pan WK. Alcohol outlets and violent crime in washington d.C. The Western Journal of Emergency Medicine. 2010;11:283-90.

83. Grubesic TH, Pridemore WA, Williams DA, Philip-Tabb L. Alcohol Outlet Density and Violence: The Role of Risky Retailers and Alcohol-Related Expenditures. Alcohol and Alcoholism. 2013;48:613-9. (in English).

84. Lipton R, Yang X, Braga AA, Goldstick J, Newton M, Rura M. The geography of violence, alcohol outlets, and drug arrests in Boston. American journal of public health. 2013;103:657-64.

85. Mair C, Gruenewald PJ, Ponicki WR, Remer L. Varying impacts of alcohol outlet densities on violent assaults: explaining differences across neighborhoods. Journal of Studies on Alcohol & Drugs. 2013;74:50-8.

86. McKinney CM, Caetano R, Harris TR, Ebama MS. Alcohol availability and intimate partner violence among US couples. Alcoholism: Clinical and Experimental Research. 2009;33:169-76.

87. Parker RN, Williams KR, McCaffree KJ, Acensio EK, Browne A, Strom KJ, et al. Alcohol availability and youth homicide in the 91 largest US cities, 1984-2006. Drug & Alcohol Review. 2011;30:505-14.

88. Reid RJ, Hughey J, Peterson NA. Generalizing the alcohol outlet-assaultive violence link: evidence from a U.S. midwestern city. Substance Use & Misuse. 2003;38:1971-82.

89. Zhu L, Gorman DM, Horel S. Hierarchical Bayesian spatial models for alcohol availability, drug "hot spots" and violent crime. International Journal of Health Geographics [Electronic Resource]. 2006;5:54.

90. Resko SM, Walton MA, Bingham CR, Shope JT, Zimmerman M, Chermack ST, et al. Alcohol availability and violence among inner-city adolescents: A multi-level analysis of the role of alcohol outlet density. American Journal of Community Psychology. 2010;46:253-62.

91. Rettenmaier AJ, Wang Z. What determines health: a causal analysis using county level data. European Journal of Health Economics. 2013;14:821-34.

92. Roman CG, Reid SE. Assessing the relationship between alcohol outlets and domestic violence: routine activities and the neighborhood environment. Violence & Victims. 2012;27:811-28.

93. Schofield TP, Denson TF. Alcohol outlet business hours and violent crime in New York state. Alcohol & Alcoholism. 2013;48:363-9.

94. Scribner RA, Mason KE, Simonsen NR, Theall K, Chotalia J, Johnson S, et al. An ecological analysis of alcohol-outlet density and campus-reported violence at 32 U.S. colleges. Journal of Studies on Alcohol & Drugs. 2010;71:184-91.

95. Xu Y, Yu Q, Scribner R, Theall K, Scribner S, Simonsen N. Multilevel spatiotemporal change-point models for evaluating the effect of an alcohol outlet control policy on changes in neighborhood assaultive violence rates. Spatial and Spatio-temporal Epidemiology. 2012;3:121-8.

1. Multiple indicators that represent some form of an index are formatted with the prefix “index of”; constructs that are represented by multiple sub-constructs/indices are underlined and separated by semi-colons; otherwise multiple indicators that are not part of an index are separated by commas. [↑](#endnote-ref-1)