Alcohol Outlet Density and Alcohol-Related Consequences

by City and Community in Los Angeles County, 2022

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Substance Abuse Prevention and Control
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Objective

This report aims at to examine and identify the spatial pattern and relationships between alcohol outlet density and alcohol-related consequences or harms, specifically violent crimes, vehicle crashes, emergency department visits, hospitalizations, and deaths across LAC cities/community jurisdictions.

Introduction

Excessive alcohol consumption is one of the leading causes of premature death and disability in Los Angeles County (LAC), and is a serious public health concern with major health, economic, and social consequences or implications.[1] Each year, approximately 2,100 people die from alcohol-related causes, with approximately 41,000 years of potential life lost (YPLL),[2*] costing LAC an estimated $11.4 billion annually.[3] A review of scientific literature found that alcohol outlet densities are positively associated with alcohol consumption[4] and related harms, including violent crimes,[5] vehicle crashes,[6] emergency department (ED) visits,[7] hospitalizations,[8] and deaths[9], among other adverse outcomes.

In this report, alcohol outlet densities and the rates of the five consequences were examined for 78 cities, 28 unincorporated areas or communities, 8 Service Planning Areas (SPA), and 5 Supervisorial Districts (SD) in LAC.

Study Methods

Defining Cities and Communities in Los Angeles County

A total of 88 cities and 121 unincorporated areas within the County of Los Angeles were identified using boundaries provided by the Los Angeles County Enterprise GIS (eGIS), based on updated cities, and Countywide Statistical Areas (CSAs) for the unincorporated areas in LAC.[10, 11] Ten cities and 93 unincorporated CSAs with populations of less than 10,000 residents,produced unstable estimates and were excluded from this report. Data for the City of Los Angeles was further divided into its 15 city council districts to provide more local information.[12]

Determining Alcohol Outlet Densities

Information on alcohol outlets within LAC in 2022 was obtained from the California Department of Alcoholic Beverage Control (ABC).[13] ABC categorizes alcohol outlets as follows:

- On-premises – outlets where alcohol is served to be consumed on site (bars and restaurants).

[*] Years of potential life lost (YPLL) is an estimate of the average time a person would have lived had he or she not died prematurely (before age 75 years). This measure is used to help quantify social and economic loss owing to premature death, and it has been promoted to emphasize specific causes of death affecting younger age groups. YPLL incorporates age at death, and its calculation mathematically weights the total deaths by applying values to death at each age, retrieved from http://www.jstor.org/stable/25759821.

- Off-premises – outlets where alcohol is sold in original, sealed containers to be consumed off site (liquor stores, convenience stores such as gas station stores, and grocery stores).

The 2022 population estimates for each city and community were used to calculate alcohol outlet densities.[14] The density (number of outlets per 10,000 residents) of on-premises and off-premises alcohol outlets was calculated separately and categorized into three equal groups (tertiles): "low," "medium," or "high" density.

Measuring Alcohol-related Harms/Consequences

Five harms associated with alcohol consumption (violent crimes,[15] vehicle crashes,[16] ED visits, [17] hospitalizations,[17] and deaths[18]) were examined using 2022 data. Violent crimes included homicide/murder, sexual assault (rape and attempted rape), all other assaults (including domestic violence), and robbery. Alcohol-involved vehicle crashes included any motor vehicle crashes in which a driver, pedestrian, or bicyclist had been drinking, and excludes motor vehicle crashes with property damage only. Alcohol-related ED visits and hospitalizations included any mention of alcohol in a primary or secondary diagnosis. Alcohol related death include all deaths that listed an alcohol-related condition as the underlying or contributing cause of death on the death certificate.

Geographic information for alcohol-related vehicle crashes and violent crimes were based on the location of the incident, and were based on residence for ED visits, hospitalizations, and deaths. If decedent residence data was missing, death location was used.

Rates per 10,000 residents for each of the five alcohol-related consequences were calculated using 2022 population estimates for each city/community, SPA, and SD, and were categorized into three equal groups: "low," "medium," or "high" rate.

Determining the Relationship between Alcohol Outlet Density and Alcohol-related Consequences.

Logistic regression modeling was performed to examine the associations between on- and off-premises alcohol outlet densities (high – values above the County median; low – values below the County median) and alcohol-related harms (high – values above the County; low – values below the County median) adjusting for Social Vulnerability Index(SVI)[19] to account for neighborhood socioeconomic conditions, household composition and disability, minority status and language, and housing type and transportation. Statistical significance was determined using $p < 0.1$.

Findings

Alcohol Outlets

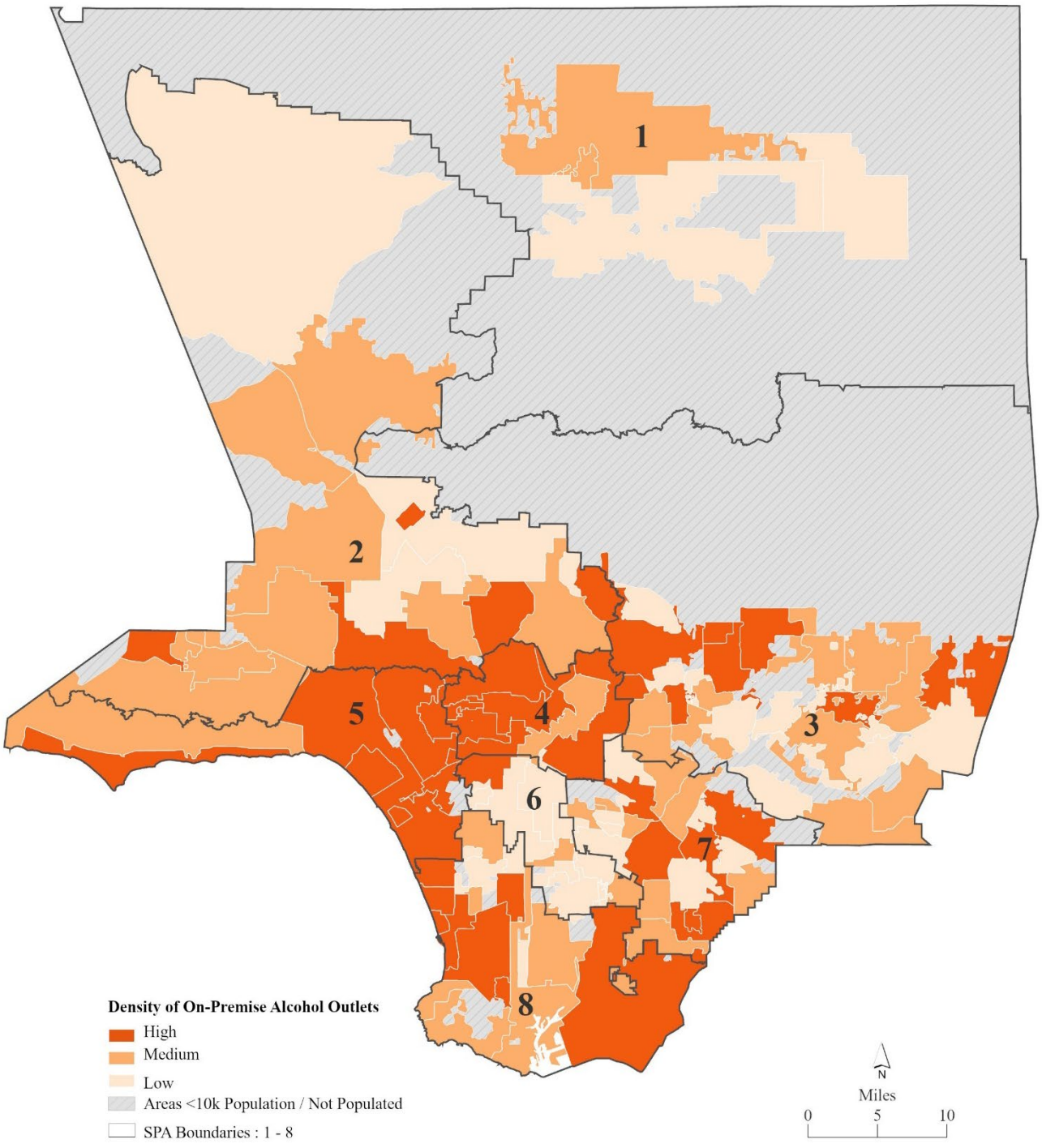
A total of 16,589 active alcohol outlet licenses were identified in LAC, of which on-premises outlets accounted for 10,188 (61%) and off-premises accounted for 6,401 (39%). In 2022, the average density of on-and off-premises alcohol outlets in LAC was 10.4 and 6.5 outlets per 10,000 population, respectively. Compared to the 2020 data[20], the overall number of

alcohol outlets increased by 173 (1.1%). The number of on-premises alcohol outlets decreased by 389 (-3.7%), while off-premises alcohol outlets increased by 562 (9.6%). Consequently, in LAC the overall density of on-premises alcohol outlets remained at 10.4 per 10,000 residents, while that of off-premises alcohol outlets rose from 5.7 in 2020 to 6.5 in 2022 per 10,000 residents.

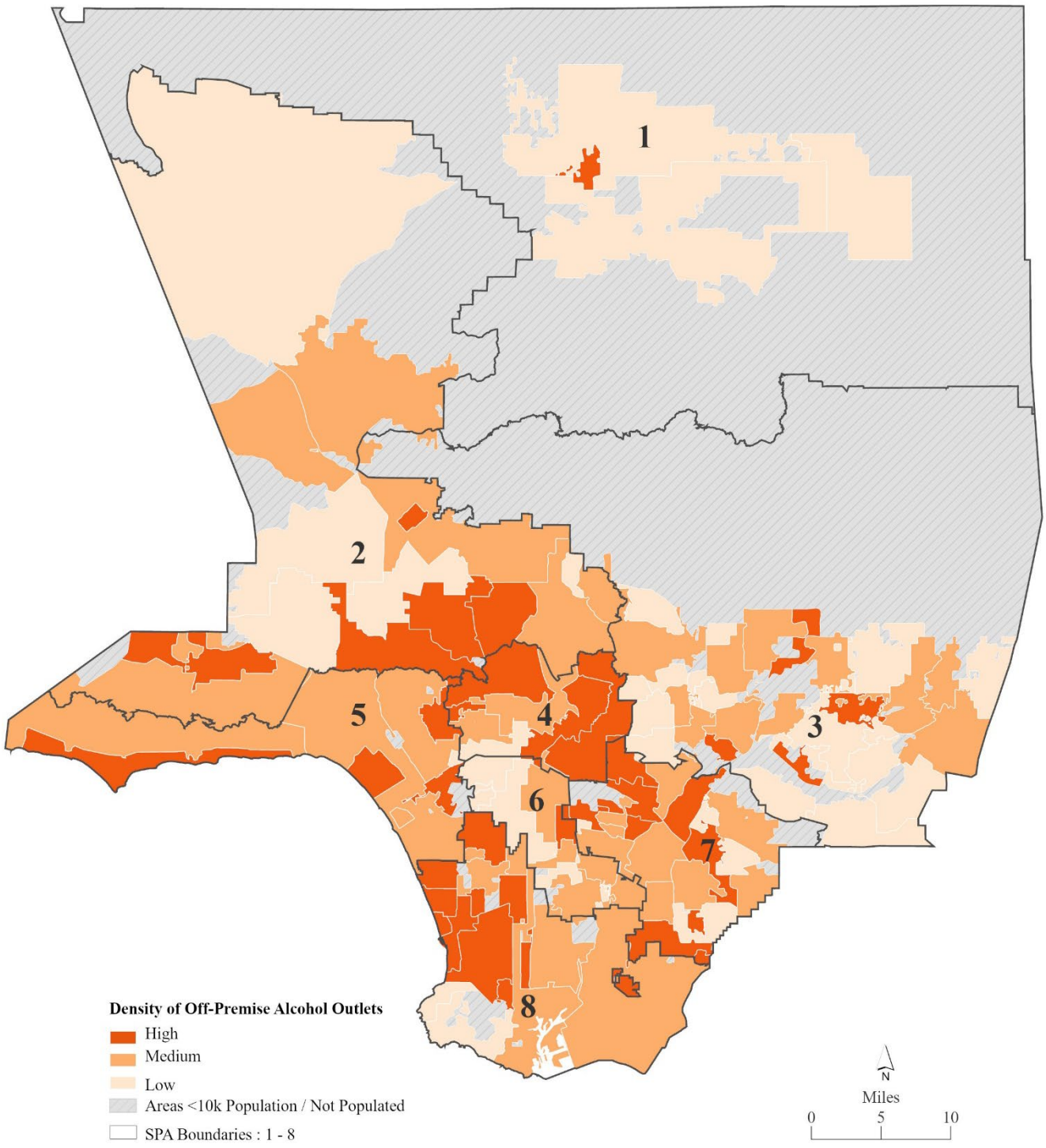
The density of on-premises alcohol outlets varied widely among cities and communities across the County, ranging from zero (Bassett) to 60 (West Hollywood), with 48 (40%) cities/communities above the countywide density of 10.4 per 10,000 residents. Off-premises alcohol outlet densities ranged from zero (San Marino, and Bassett) to 15.5 (Culver City), with 56 (46.7%) cities/communities above the countywide density of 6.5 per 10,000 residents. Tables 1A, 1B, and 1C present the densities of on-premises and off-premises alcohol outlets by cities and communities, SPAs, and SDs, respectively. Among on-premises alcohol outlets, 6,665 (65.4 %) were in cities and communities of high on-premises outlet density (Map1, and Table 1A). Among off-premises outlets, 2,094 (32.7 %) were in the cities and communities with high outlet density (Map 2, and Table 1A).

The geographical distribution of on- and off-premises alcohol outlets varied across LAC (Maps 1 and 2). A higher density of on-premises alcohol outlets was associated with lower SVI or more affluent communities, such as West Hollywood, El Segundo, Beverly Hills, Malibu, Marina del Rey, Santa Monica, and Culver City (Map 1, $p < 0.1$). Conversely, no significant association was found between the density of off-premises alcohol outlets and SVI overall.

Map 1. On-Premises Alcohol Outlet Density (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPA), Los Angeles County, 2022



Map 2. Off-Premises Alcohol Outlet Density (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPA), Los Angeles County, 2022



Association Between Alcohol Outlet Density and Alcohol-related Consequences

The rates of alcohol-related consequences (violent crimes, vehicle crashes, ED visits, hospitalizations, and death) are presented by each city and community (Table 2A, Maps 3 to 7), SPA (Table 2B), and SD (Table 2C). The associations between on/off-premises alcohol outlet density and various alcohol-related consequences (e.g., violent crimes, vehicle crashes) were tested after accounting for the Social Vulnerability Index.

Violent Crimes

The violent crime rate within Los Angeles County cities/communities ranged from 0.3 (San Gabriel) to 172.8 (Council District 8), with 29 (24.2%) cities/communities above the overall County rate of 59.6 per 10,000 population (Table 2A, Map 3).

Cities and communities with a high density of **on-premises** alcohol outlets were 3.1 times more likely to have high *violent crime* rates than cities and communities with a low density of on-premises alcohol outlets, even after accounting for the Social Vulnerability Index ($p < 0.1$).

Cities and communities with a high density of **off-premises** alcohol outlets were 5.2 times more likely to have high *violent crime* rates than cities and communities with a low density of off-premises alcohol outlets, even after accounting for the Social Vulnerability Index ($p < 0.1$).

Alcohol-involved Vehicle Crashes

The alcohol-involved vehicle crash rate within Los Angeles County cities/communities ranged from zero (Lomita, Rancho Palos Verdes, Sierra Madre, Bassett, and Palos Verdes Estates) to 25 (City of Commerce), with 44 (36.7%) cities/communities above the overall County rate of 4.4 per 10,000 population (Table 2A, Map 4).

The associations between **on/off-premises** alcohol outlet density and alcohol-involved vehicle crashes were not statistically significant.

Alcohol-related ED Visits

The alcohol-related ED visit rate within Los Angeles County cities/communities ranged from 14.5 (Cerritos) to 321.8 (La Mirada), with 45 (37.5%) cities/communities above the County overall rate of 52.4, per 10,000 population (Table 2A, Map 5).

The associations between **on/off-premises** alcohol outlet density and alcohol-involved ED visits were not statistically significant.

Alcohol-related Hospitalizations

The alcohol-related hospitalization rate within Los Angeles County cities/communities ranged from 15.7 (Diamond Bar) to 112.5 (Stevenson Ranch), with 49 (40.8%) cities/communities above the overall County rate of 49.4 per 10,000 population (Table 2A, Map 6).

Cities and communities with a high density of **off-premises** alcohol outlets were 3.5 times more likely to have high alcohol-related hospitalization rates than cities and communities with a low density of off-premises alcohol outlets, even after accounting for the Social Vulnerability Index ($p < 0.1$).

The association between **on-premises** alcohol outlets and alcohol-related hospitalizations was not statistically significant.

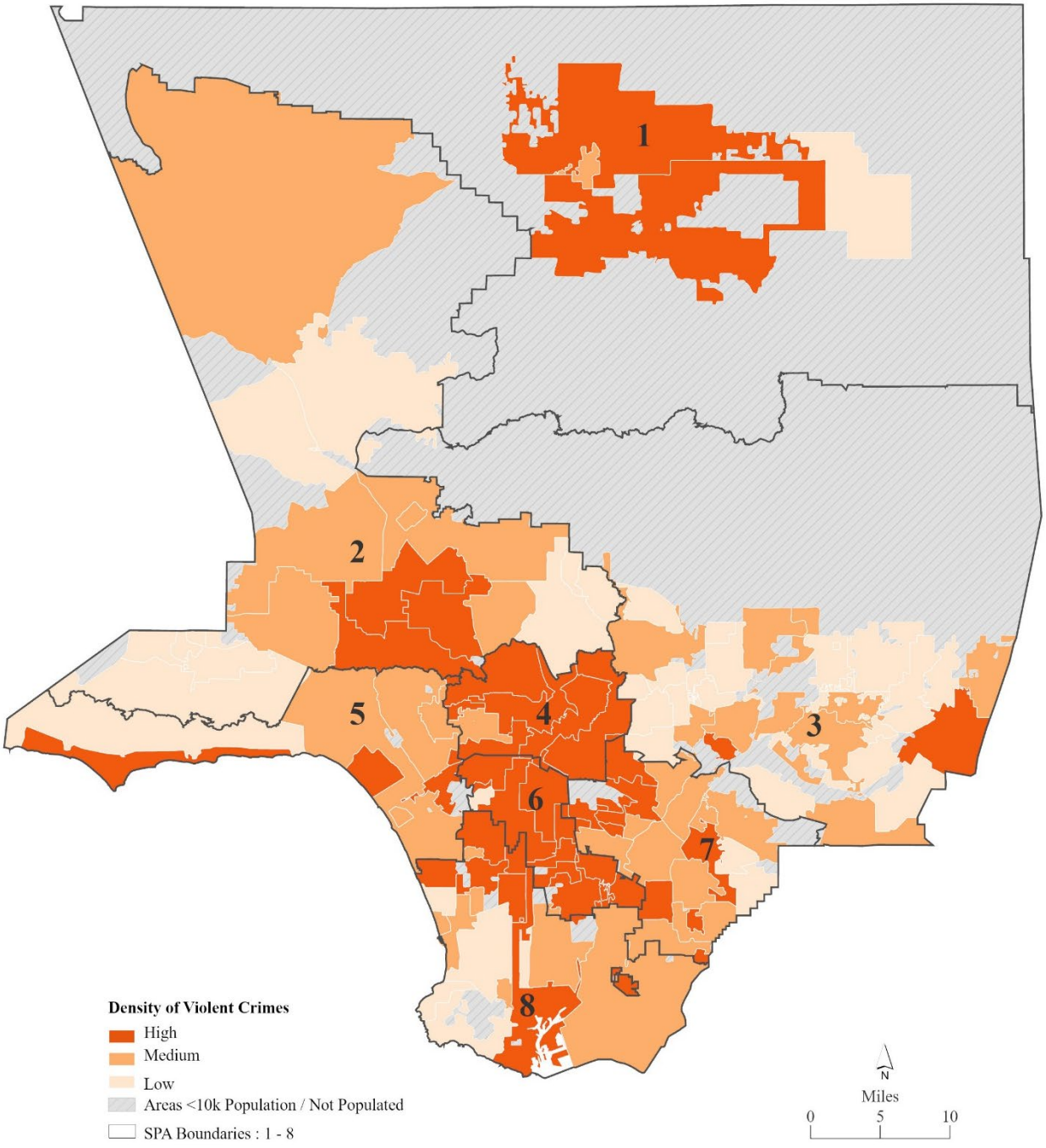
Alcohol-related Deaths

The alcohol-related death rate within Los Angeles County cities/communities ranged from zero (Santa Monica Mountains, San Marino, Signal Hill, La Canada Flintridge, and Castaic) to 6.4 (Council District 1), with 44 (36.7%) above the overall County rate of 2.9 per 10,000 population (Table 2A, Map 7).

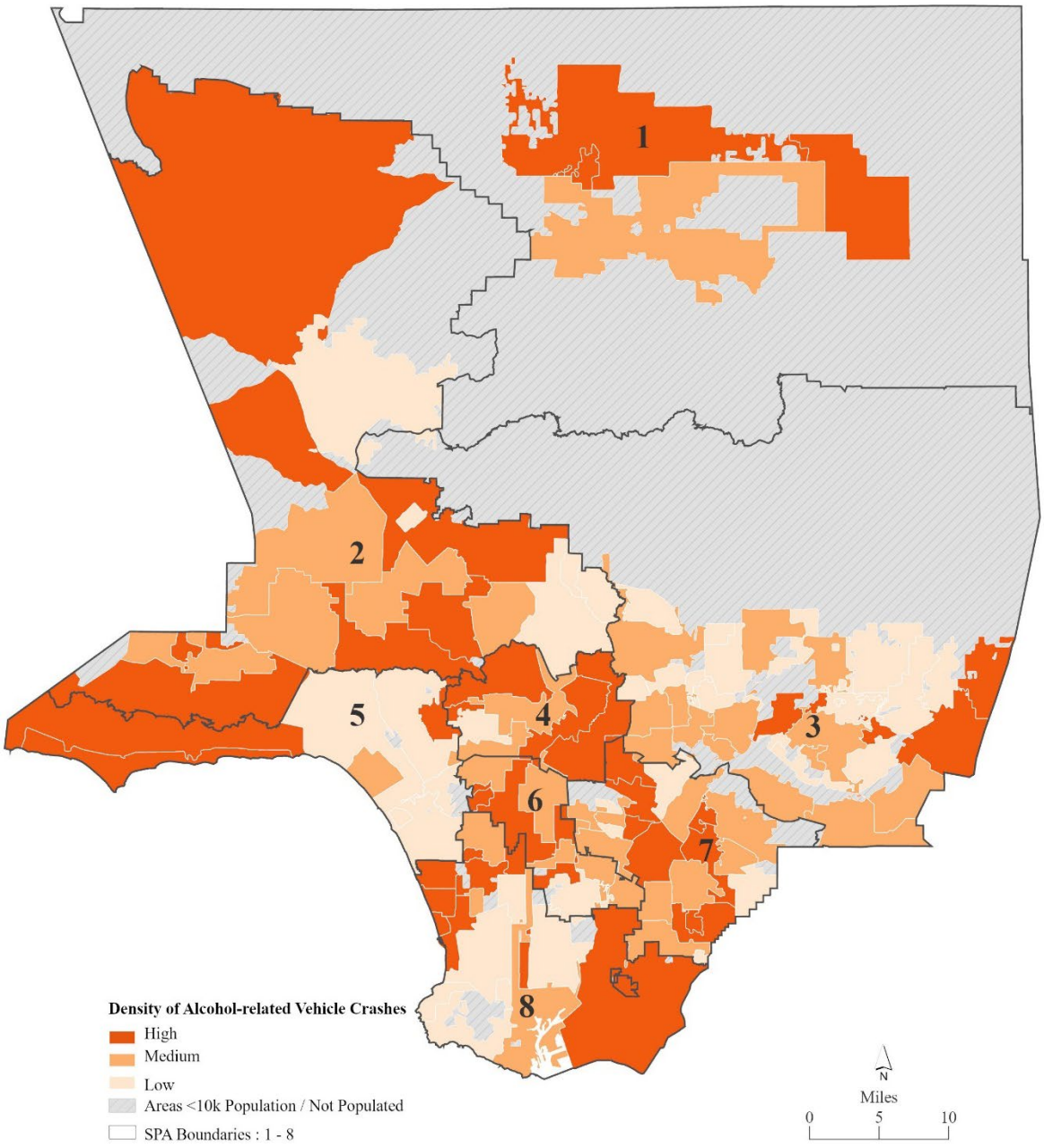
Cities and communities with a high density of **off-premises** alcohol outlets were 4.2 times more likely to have high alcohol-related death rates than cities and communities with a low density of off-premises alcohol outlets, even after accounting for the Social Vulnerability Index ($p < 0.1$).

The association between **on-premises** alcohol outlets density and alcohol-related deaths was not statistically significant.

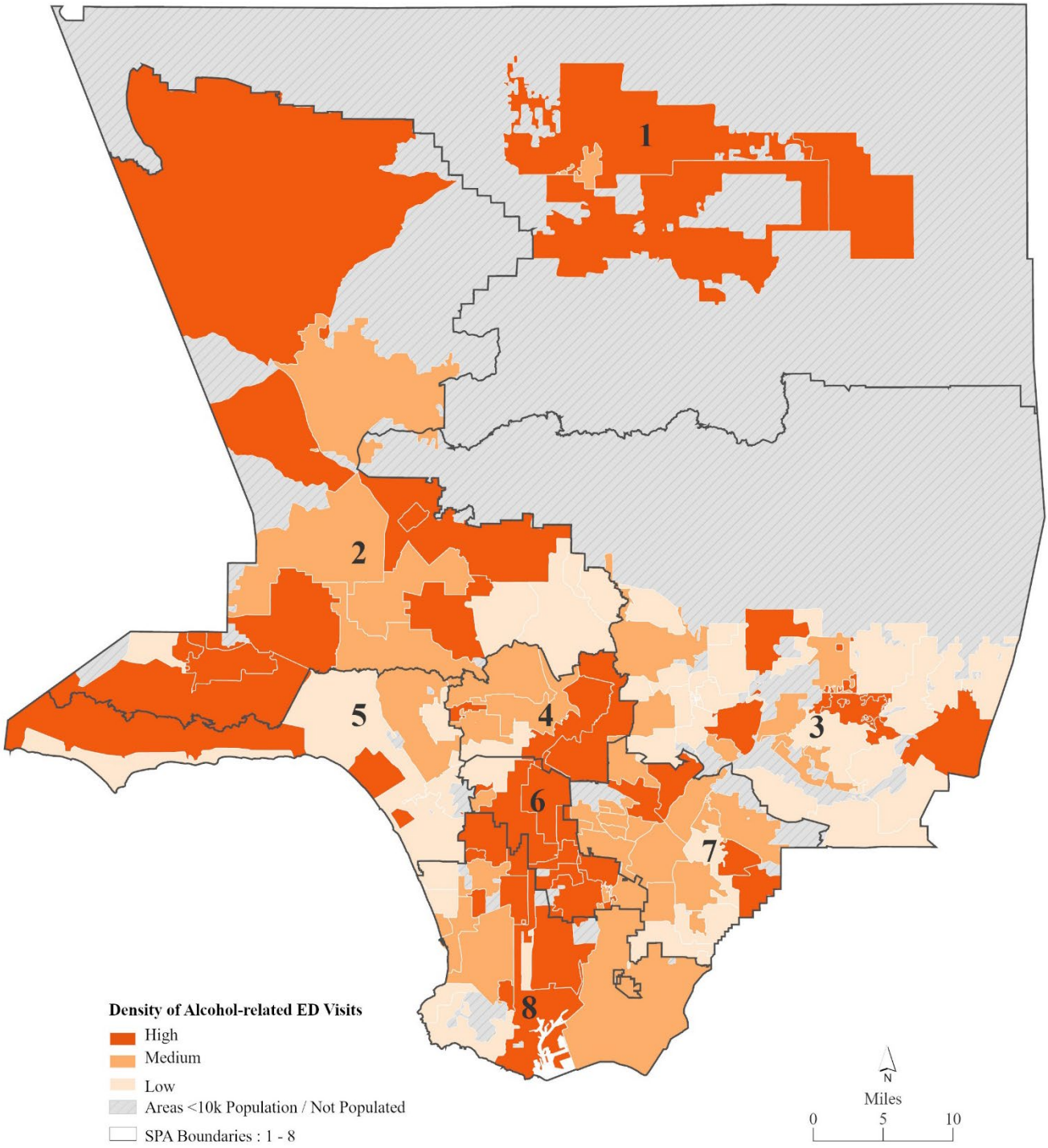
Map 3. Violent Crime Rates (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPAs), Los Angeles County, 2022



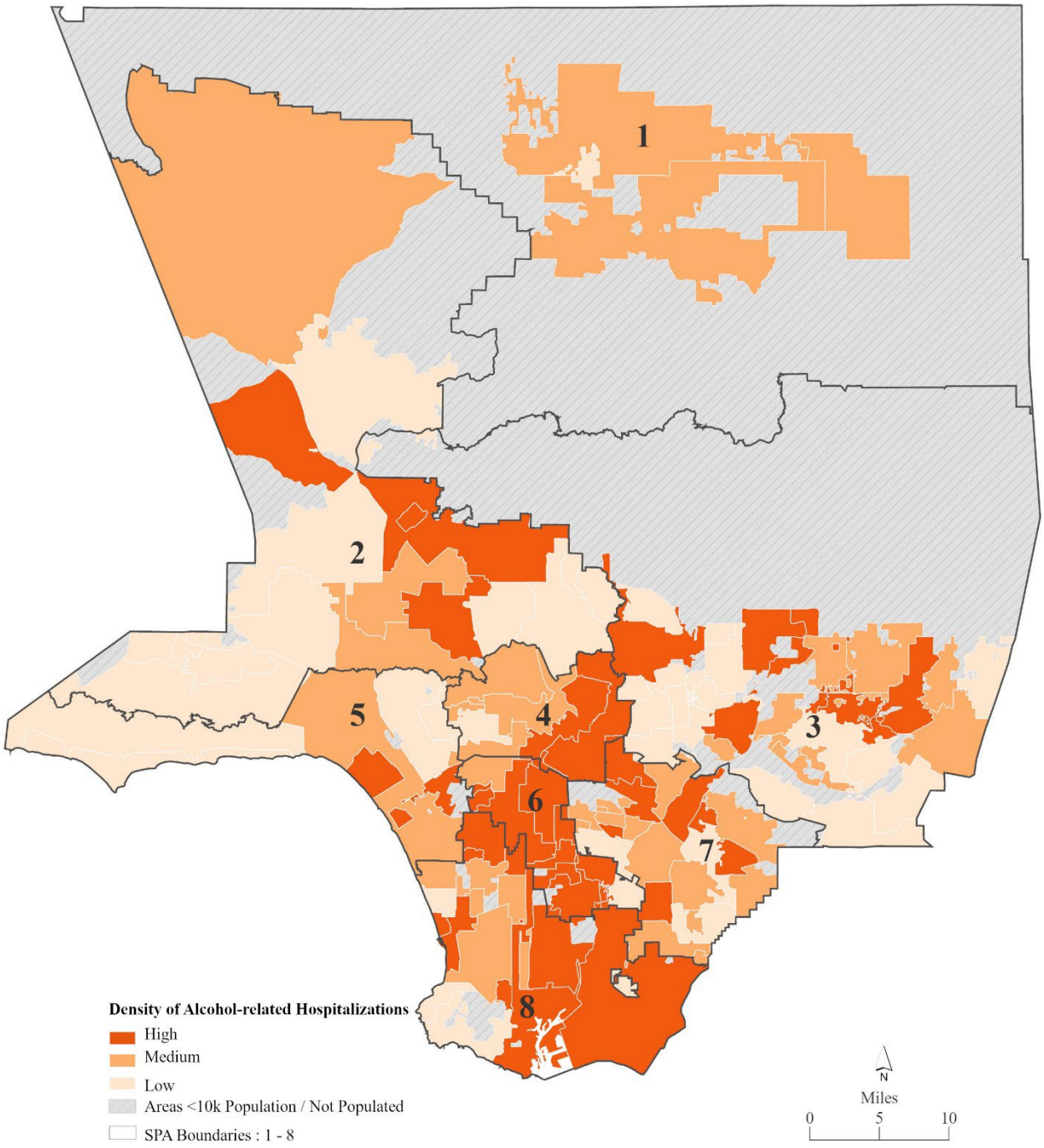
Map 4. Alcohol-related Vehicle Crash Rates (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPAs), Los Angeles County, 2022



Map 5. Alcohol-related Emergency Department Visit Rates (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPAs), Los Angeles County, 2022



Map 6. Alcohol-related Hospitalization Rate (per 10,000 population) among Cities, Communities, and Service Planning Areas (SPAs), Los Angeles County, 2022



Map 7. Alcohol-related Deaths Rate (per 10,000 population) Among Cities, Communities, and Service Planning Areas (SPAs), Los Angeles County, 2022

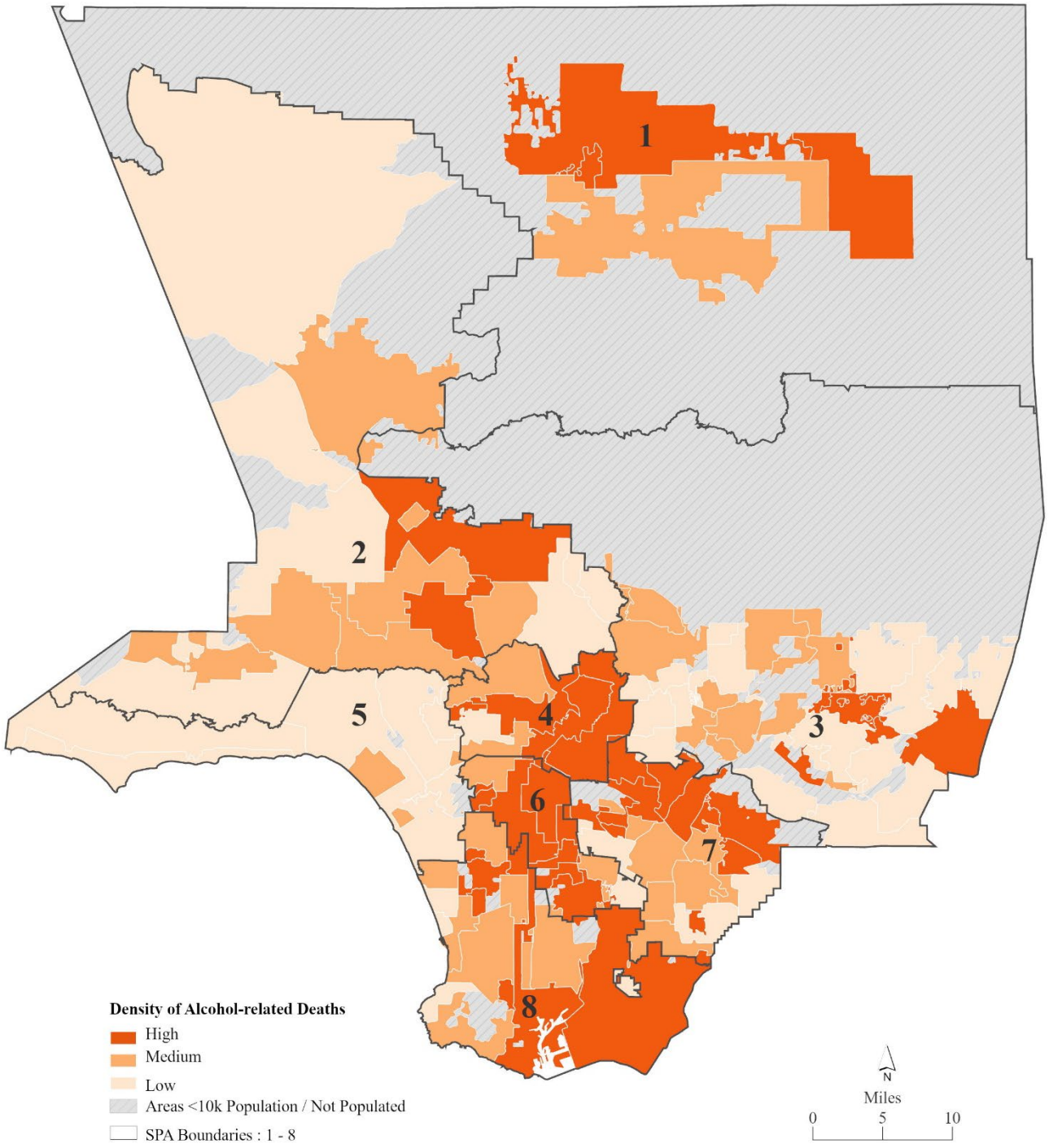


Table 1A. On-Premises and Off-Premises Alcohol Outlet Density (AOD) by City and Community, Los Angeles County, 2022*

City/Communities	On-Premises AOD		Off-Premises AOD	
Los Angeles County	**10.4**	-	**6.5**	-
Agoura Hills	22.0		8.7	
Alhambra	9.3		4.0	
Altadena	3.8		3.9	
Arcadia	16.6		6.6	
Artesia	31.1		12.4	
Athens-Westmont	0.7		5.8	
Azusa	6.0		7.2	
Azusa (Unincorporated)	1.4		3.5	
Baldwin Park	3.2		7.1	
Bassett	0.0		0.0	
Bell	5.4		6.2	
Bell Gardens	6.6		9.6	
Bellflower	6.1		6.8	
Beverly Hills	45.0		10.8	
Burbank	16.7		7.9	
Calabasas	11.2		7.6	
Carson	6.8		5.6	
Castaic	3.2		5.0	
Cerritos	17.5		5.1	
Charter Oak	7.6		6.6	
Claremont	15.6		3.5	
Commerce	12.5		15.0	
Compton	1.6		6.4	
Covina	12.5		8.2	
Covina (Unincorporated)	0.6		1.9	
Cudahy	1.4		5.9	
Culver City	32.6		15.5	
Diamond Bar	6.9		4.8	
Downey	11.6		6.2	
Duarte	7.5		8.2	
East Los Angeles	3.8		8.0	
East Rancho Dominguez	0.7		4.0	
El Monte	4.1		6.3	
El Segundo	50.2		11.8	
Florence-Firestone	3.4		9.0	
Gardena	16.2		9.1	
Glendale	10.9		7.3	
Glendora	10.5		4.8	
Hacienda Heights	5.3		4.6	
Hawaiian Gardens	14.8		8.9	
Hawthorne	5.3		6.1	
Hermosa Beach	37.8		12.6	
Huntington Park	6.3		8.9	
Inglewood	6.1		8.7	
La Canada Flintridge	13.1		7.6	
La Crescenta-Montrose	1.5		4.1	
La Mirada	8.1		5.8	
La Puente	5.9		8.7	
La Verne	16.2		6.8	
Lake Los Angeles	1.5		4.5	
Lakewood	7.5		8.0	
Lancaster	6.0		4.7	
Lawndale	5.5		8.1	
Lennox	2.0		6.5	
Lomita	15.0		8.0	
Long Beach	13.4		7.1	
Los Angeles	**10.5**	-	**6.4**	-
Council District 1	10.7		8.4	
Council District 2	7.6		7.8	
Council District 3	7.5		4.9	
Council District 4	19.0		8.4	
Council District 5	19.2		6.5	
Council District 6	3.7		5.3	
Council District 7	2.9		5.8	
Council District 8	1.6		4.8	
Council District 9	3.3		5.7	
Council District 10	11.5		5.1	
Council District 11	18.5		6.3	
Council District 12	6.1		5.3	
Council District 13	19.6		6.4	
Council District 14	20.7		8.2	
Council District 15	6.2		6.7	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

*** Cities/communities with residents less than 10,000 are excluded**

† For the City of Los Angeles, both on-premises and off-premises Alcohol Outlet Densities were medium (61St and 51St percentile, respectively)

Table 1A. On-Premises and Off-Premises Alcohol Outlet Density (AOD) by City and Community, Los Angeles County, 2022* (*continued*)

City/Communities	On-Premises AOD		Off-Premises AOD	
Lynwood	4.6		6.1	
Malibu	39.0		13.3	
Manhattan Beach	28.5		9.4	
Marina del Rey	33.9		5.9	
Maywood	6.9		11.5	
Monrovia	17.3		6.1	
Montebello	8.6		7.4	
Monterey Park	10.1		5.1	
Northeast San Gabriel	1.0		3.9	
Norwalk	4.1		6.1	
Palmdale	4.5		4.1	
Palos Verdes Estates	5.4		1.6	
Paramount	6.7		6.7	
Pasadena	19.4		5.8	
Pico Rivera	8.0		8.0	
Pomona	4.9		5.9	
Quartz Hill	5.4		7.8	
Rancho Palos Verdes	5.9		4.5	
Redondo Beach	21.4		8.6	
Rosemead	7.2		5.9	
Rowland Heights	11.0		3.9	
San Dimas	11.2		7.3	
San Fernando	12.7		9.8	
San Gabriel	18.2		6.2	
San Jose Hills	1.0		2.0	

City/Communities	On-Premises AOD		Off-Premises AOD	
San Marino	4.9		0.0	
Santa Clarita	9.8		6.0	
Santa Fe Springs	13.2		13.8	
Santa Monica	32.6		8.5	
Santa Monica Mountains	9.0		6.2	
Sierra Madre	13.0		3.7	
Signal Hill	11.2		9.5	
South El Monte	11.2		12.7	
South Gate	5.4		7.0	
South Pasadena	13.3		4.5	
South Whittier	1.9		5.5	
Stevenson Ranch	9.5		6.6	
Temple City	8.5		4.2	
Torrance	13.9		7.6	
Valinda	1.0		4.9	
View Park/Windsor Hills	1.8		5.5	
Walnut	3.8		4.7	
Walnut Park	3.3		2.7	
West Carson	3.3		7.8	
West Covina	7.1		4.7	
West Hollywood	59.6		12.3	
West Whittier/Los Nietos	2.9		4.6	
Whittier	11.8		7.0	
Willowbrook	1.5		4.6	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

*** Cities/communities with residents less than 10,000; are excluded**

Table 1B. On-Premises and Off-Premises Alcohol Outlet Density (per 10,000 population) by Service Planning Area (SPA), Los Angeles County, 2022

SPA	On-premises AOD		Off-premises AOD	
Los Angeles county	**10.4**	**-**	**6.5**	**-**
Antelope Valley (SPA 1)	5.1		4.8	
San Fernando (SPA 2)	8.5		6.3	
San Gabriel (SPA 3)	9.1		5.8	
Metro (SPA 4)	20.6		7.6	
West (SPA 5)	20.9		7.2	
South (SPA 6)	2.5		5.4	
East (SPA 7)	7.5		7.2	
South Bay (SPA 8)	11.8		7.3	

Table 1C. On-Premises and Off-Premises Alcohol Outlet Density (per 10,000 population) by Supervisorial District (SD), Los Angeles County, 2022

SD	On-premises AOD		Off-premises AOD	
Los Angeles county	**10.4**	**-**	**6.5**	**-**
District 1	10.1		6.8	
District 2	8.9		6.5	
District 3	12.7		6.2	
District 4	9.7		7.1	
District 5	10.5		6.0	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

Table 2A. Alcohol-related Consequences (rates per 10,000 population) by City and Community, Los Angeles County, 2022*

City/Communities	Violent Crimes		Vehicle Crashes		ED Visits		Hospitalizations		Deaths**	
Los Angeles County	**59.6**	-	**4.4**	-	**52.4**	-	**49.4**	-	**2.9**	-
Agoura Hills	16.4		4.1		36.3		29.7		2.0	
Alhambra	19.6		4.0		44.2		34.6		1.7	
Altadena	20.5		1.9		28.9		39.0		2.9	
Arcadia	25.4		2.7		25.4		31.5		0.9	
Artesia	54.6		5.0		43.5		45.3		5.0	
Athens-Westmont	111.9		7.2		83.9		81.8		5.1	
Azusa	26.2		4.4		47.8		48.3		2.5	
Azusa (Unincorporated)	18.7		2.1		56.0		53.2		6.2	
Baldwin Park	45.2		6.1		49.1		51.0		2.8	
Bassett	14.8		0.0		50.3		48.8		1.5	
Bell	60.8		4.2		46.6		52.1		4.8	
Bell Gardens	38.1		7.3		46.7		52.1		2.6	
Bellflower	58.0		4.0		49.0		54.7		2.7	
Beverly Hills	48.1		6.2		22.2		28.7		0.6	
Burbank	30.6		4.1		39.1		31.7		2.5	
Calabasas	14.5		3.1		65.6		31.3		2.6	
Carson	47.6		2.7		55.8		54.1		2.2	
Castaic	47.5		5.0		64.0		42.5		0.0	
Cerritos	28.7		8.3		14.5		19.4		1.0	
Charter Oak	24.1		2.4		56.2		48.2		4.8	
Claremont	28.6		5.2		27.8		26.7		1.4	
Commerce	151.4		25.0		69.9		84.9		5.8	
Compton	111.8		2.2		61.8		61.4		3.1	
Covina	32.5		2.8		68.7		61.6		3.2	
Covina (Unincorporated)	15.2		8.9		73.4		56.9		3.8	
Cudahy	71.0		1.4		47.5		52.9		5.0	
Culver City	72.3		2.5		36.5		99.6		1.8	
Diamond Bar	17.1		4.8		17.1		15.6		1.1	
Downey	45.1		5.9		41.6		46.2		2.5	
Duarte	31.8		2.4		36.1		52.7		2.8	
East Los Angeles	55.8		6.5		51.6		55.4		3.8	
East Rancho Dominguez	62.3		4.0		51.6		55.6		2.0	
El Monte	37.7		3.9		57.5		52.6		2.8	
El Segundo	69.2		7.7		31.9		42.6		2.4	
Florence-Firestone	106.2		5.4		66.5		62.0		5.2	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

*Cities/communities with a population of less than 10,000 are excluded.

** Death rates by cities/communities were based on residential addresses of decedents. If residential address was missing, death location or event address was used.

Table 2A. Alcohol-related Consequences (rates per 10,000 population) by City and Community, Los Angeles County, 2022* (*continued*)

City/Communities	Violent Crimes		Vehicle Crashes		ED Visits		Hospitalizations		Deaths**	
Gardena	63.0		0.7		58.8		46.6		2.7	
Glendale	14.7		2.2		30.9		33.5		1.0	
Glendora	26.8		2.5		39.4		52.1		1.6	
Hacienda Heights	16.8		3.8		36.5		35.2		1.3	
Hawaiian Gardens	58.6		0.7		37.9		43.8		3.7	
Hawthorne	73.0		5.2		53.1		49.9		3.2	
Hermosa Beach	28.9		6.3		44.1		58.3		1.1	
Huntington Park	77.9		3.2		50.6		42.3		3.2	
Inglewood	64.4		3.6		78.3		66.1		2.3	
La Canada Flintridge	12.1		2.5		16.1		21.1		0.0	
La Crescenta-Montrose	4.1		2.6		34.0		35.5		1.5	
La Mirada	16.7		2.1		321.8		42.0		1.0	
La Puente	31.0		0.5		49.2		45.7		4.8	
La Verne	17.5		2.2		35.6		45.0		1.9	
Lake Los Angeles	25.7		6.0		76.3		45.3		5.3	
Lakewood	46.0		2.9		37.4		42.6		2.7	
Lancaster	83.6		5.8		85.9		44.0		4.4	
Lawndale	43.0		3.2		58.9		47.6		3.2	
Lennox	52.6		6.5		103.3		70.2		3.5	
Lomita	45.5		0.0		59.2		61.7		4.9	
Long Beach	52.9		6.2		48.5		58.7		3.2	
Los Angeles	**85.0**	-	**4.3**	-	**56.2**	-	**53.9**	-	**3.3**	-
Council District 1	140.7		5.8		69.5		78.3		6.4	
Council District 2	64.5		4.9		67.0		59.1		3.5	
Council District 3	50.4		3.5		55.2		40.2		2.5	
Council District 4	58.5		6.5		53.6		47.5		2.3	
Council District 5	47.6		2.2		43.8		36.5		1.4	
Council District 6	58.9		3.6		52.6		44.8		2.8	
Council District 7	43.8		5.3		59.1		59.4		4.6	
Council District 8	172.8		5.7		74.1		75.5		4.9	
Council District 9	142.4		4.6		58.5		62.7		4.1	
Council District 10	78.3		3.1		40.1		46.1		2.8	
Council District 11	43.2		2.8		36.0		42.1		1.8	
Council District 12	33.2		3.2		45.8		34.0		1.5	
Council District 13	94.0		3.4		41.4		45.0		3.3	
Council District 14	148.4		5.8		62.1		67.1		3.6	
Council District 15	97.8		3.9		84.1		69.8		4.3	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

*Cities/communities with a population of less than 10,000 are excluded.
** Death rates by cities/communities were based on residential addresses of decedents. If residential address was missing, death location or event address was used.

† For the City of Los Angeles, most alcohol-related consequences measures ranked high (violent crimes, ED visits, hospitalizations, and deaths were at 90th, 71st, 72nd, and 76th percentile, respectively), and vehicle crashes, ranked medium (61st percentile).

Table 2A. Alcohol-related Consequences (rates per 10,000 population) by City and Community, Los Angeles County, 2022* (*continued*)

City/Communities	Violent Crimes		Vehicle Crashes		ED Visits		Hospitalizations		Deaths**	
Lynwood	77.7		3.6		68.4		65.4		2.7	
Malibu	55.2		12.4		35.2		33.3		1.9	
Manhattan Beach	18.8		4.9		26.9		34.1		1.7	
Marina del Rey	32.2		2.5		86.5		91.6		2.5	
Maywood	54.7		1.2		42.4		42.4		2.0	
Monrovia	28.6		4.6		56.0		62.1		2.9	
Montebello	53.5		2.8		56.4		48.1		4.7	
Monterey Park	26.4		4.7		26.1		32.1		1.5	
Northeast San Gabriel	11.3		0.5		28.5		29.4		0.9	
Norwalk	37.5		4.3		41.4		50.2		2.5	
Palmdale	54.4		3.9		59.4		42.7		3.0	
Palos Verdes Estates	3.1		0.0		26.4		27.2		0.8	
Paramount	59.3		2.9		41.3		40.7		1.9	
Pasadena	37.1		4.4		47.2		54.6		2.4	
Pico Rivera	48.0		3.1		46.7		54.9		3.8	
Pomona	57.6		5.2		54.0		49.7		3.1	
Quartz Hill	27.9		8.5		52.8		27.9		3.9	
Rancho Palos Verdes	12.6		0.0		25.8		37.9		1.9	
Redondo Beach	41.1		7.5		49.0		54.2		2.3	
Rosemead	43.6		4.2		22.6		31.4		2.6	
Rowland Heights	30.7		3.2		30.7		25.6		1.3	
San Dimas	27.0		2.6		36.3		53.6		1.8	
San Fernando	39.9		2.1		59.2		57.5		2.6	
San Gabriel	0.3		4.2		22.3		17.9		1.3	
San Jose Hills	19.8		2.0		46.8		43.3		2.5	
San Marino	3.3		0.8		14.8		17.3		0.0	
Santa Clarita	15.3		2.5		50.3		38.9		2.2	
Santa Fe Springs	66.1		21.7		29.6		24.3		2.1	
Santa Monica	83.2		3.3		66.8		53.6		2.2	
Santa Monica Mountains	15.1		14.5		54.3		24.1		0.0	
Sierra Madre	9.3		0.0		14.9		27.0		1.9	
Signal Hill	71.6		12.9		44.0		41.4		0.0	
South El Monte	64.1		3.6		40.7		46.8		3.1	
South Gate	53.0		4.3		41.8		39.2		1.8	
South Pasadena	17.9		2.3		25.5		31.2		1.9	
South Whittier	25.1		4.0		64.2		59.7		3.1	
Stevenson Ranch	14.1		6.1		136.4		112.4		1.9	
Temple City	19.4		1.1		23.0		32.2		1.9	

Low (0-33%) **Medium (34-66%)** **High (67-100%)**

*Cities/communities with a population of less than 10,000 are excluded.
**Death rates by cities/communities were based on residential addresses of decedents. If residential address was missing, death location or event address was used.

Table 2A. Alcohol-related Consequences (rates per 10,000 population) by City and Community, Los Angeles County, 2022* (*continued*)

City/Communities	Violent Crimes		Vehicle Crashes		ED Visits		Hospitalizations		Deaths**	
Torrance	26.0		2.7		46.3		50.6		2.6	
Valinda	20.9		4.1		48.5		44.9		1.8	
View Park/Windsor Hills	25.6		11.9		49.3		65.8		3.7	
Walnut	12.6		1.1		16.9		15.8		1.4	
Walnut Park	56.1		3.3		50.1		42.1		0.7	
West Carson	25.3		11.7		39.3		47.4		2.3	
West Covina	39.4		3.9		28.0		31.8		1.7	
West Hollywood	92.0		8.0		58.5		49.1		4.0	
West Whittier/Los Nietos	28.0		8.2		45.1		52.4		3.1	
Whittier	28.4		3.3		47.7		47.8		4.2	
Willowbrook	106.8		5.1		74.7		64.5		3.1	

Table 2B. Alcohol-related Consequences (rates per 10,000 population) by Service Planning Area (SPA), Los Angeles County, 2022

SPA	Violent Crime		Vehicle Crash		ED Visits		Hospitalizations		Death	
Antelope Valley (SPA 1)	63.7		6.9		73.8		45.5		4.2	
San Fernando (SPA 2)	41.5		4.0		51.5		43.4		2.5	
San Gabriel (SPA 3)	31.7		4.1		40.2		41.8		2.3	
Metro (SPA 4)	87.9		4.6		53.2		55.1		3.6	
West (SPA 5)	55.4		3.1		40.9		45.0		1.7	
South (SPA 6)	126.5		4.2		60.3		61.6		3.6	
East (SPA 7)	47.2		5.0		56.2		47.6		3.0	
South Bay (SPA 8)	60.7		4.8		57.8		58.4		3.2	

Table 2C. Alcohol-related Consequences (rates per 10,000 population) by Supervisorial District (SD), Los Angeles County, 2022

SD	Violent Crimes		Vehicle Crash		ED Visits		Hospitalizations		Deaths**	
District 1	74.0		4.8		48.2		48.7		3.1	
District 2	83.4		4.3		58.2		59.8		3.3	
District 3	50.8		4.0		51.0		43.7		2.5	
District 4	53.8		4.6		54.4		50.8		2.9	
District 5	35.0		4.3		50.1		43.5		2.6	

Low (0-33%) Medium (34-66%) High (67-100%)

*Cities/communities with a population of less than 10,000 are excluded. ** Death rates by cities/communities were based on residential addresses of decedents. If residential address was missing, death location or event address was used.

Discussion

Excessive alcohol consumption continues to be a serious public health concern with substantial implications for disease, violent crimes, traffic collisions, work loss, and social relationships.[2] During 2022 in Los Angeles County, alcohol was involved in an estimated 4,324 motor vehicle crashes, 6,131 motor vehicle injuries, 141 motor vehicle fatalities, 51,325 ED visits, 48,346 hospitalizations,[3] and 2,816 alcohol-attributable deaths.[18]

Drinking among youth and adults is strongly influenced by environmental or structural factors, such as alcohol control policies, retailer marketing strategies[21], as well as alcohol access and availability. The findings of this report are consistent with the research literature on the positive relationship between alcohol availability, measured by alcohol outlet density, and alcohol-related adverse public health consequences. LAC communities and cities with higher alcohol outlet density were more likely to have higher rates violent crimes, alcohol-involved hospitalizations, and deaths even after accounting for the social vulnerability index (SVI). Although the literature as well as in the 2020 report[20] indicated a positive association between alcohol outlet density and vehicle crashes, these associations were not statistically significant in this report.

This report has a couple of limitations. Some data on alcohol outlets and alcohol-related harms were aggregated to city, community, and/or other geographical boundaries based on zip codes due to data availability, which may have lost some precision in assigning incidents when zip codes are shared with other areas. Binary logistic regression may have reduced power to detect statistically significant associations and potential unknown or unmeasured confounders were not controlled for in this study. In addition, this type of ecological analysis cannot be used to infer causality and thus findings should be interpreted with caution. Nevertheless, the findings in the report suggest there are potential harms associated with higher alcohol outlet density. A high alcohol outlet density can increase alcohol consumption and its consequences by increasing local availability of alcohol, reducing alcohol prices due to retailer competition, and establishing and reinforcing drinking behavior norms.[22]

Alcohol misuse and abuse is highly preventable and treatable. The findings in this report underscore the need to take targeted preventive actions to reduce alcohol outlet density and adverse alcohol-related consequences among adults and youth, especially among those cities/communities that had particularly high alcohol outlet densities and rates of alcohol-related social and health consequences.

Recommendations

Policymakers, schools, businesses, health care providers, and other community stakeholders can collaborate and implement a more comprehensive array of the following strategies to reduce the burden of excessive alcohol consumption in our cities and communities.

1. Limit Alcohol Outlet Density

Limiting alcohol outlet density has been found to be effective in limiting the availability of alcohol and reducing harms in communities. For example, eliminating one bar per zip code was estimated to lead to 290 fewer serious assaults per year in California.[4]

Although the California Alcoholic Beverage Control (ABC) has sole authority over the issuing and renewal of alcohol retail licenses in California, local jurisdictions, law enforcement, and community advocates can play an important role in the ABC decision-making process, including commenting on or protesting an application, and encouraging revocation of an existing ABC license for continued violations.[23,24] Further, local jurisdictions can apply land use powers to influence the process by limiting the number of new alcohol outlets allowed by the city or County general plans or by imposing operating restrictions on new or existing outlets.[4]

> ***New Alcohol Outlets*:** Local jurisdictions can require applicants to obtain a Conditional Use Permit (CUP) or implement zoning ordinances prior to new ABC license approval, which place legal conditions on the operation of alcohol outlets, such as restrictions on locations/density, hours of sale, training of staff, types of beverages sold, alcohol ads on public property, and business operations (e.g., no drinking allowed outside of the premises).[25]
>
> ***Existing Alcohol Outlets:*** Local jurisdictions can implement "deemed approved" ordinances that require off-premises outlets to comply with business performance standards (e.g. properly maintained premises that do not adversely affect the surrounding community), require owner/employees not to permit or facilitate unlawful behavior (e.g. alcohol sales to minors, public consumption in property or surrounding sidewalk, or conducting other illegal activities),[26] and recommend replacement of strong alcohol beverages with products of lower alcohol content and healthy alternative drinks.

2. Enforce Restrictions on Alcohol Availability and Accessibility to Minors

Early initiation and use of alcohol by youth increase the risk of alcohol-related problems in adulthood.[27] Restricting the ability of minors to obtain alcohol at home or in the community can change perceived norms regarding the permissibility of underage drinking and may delay early initiation of alcohol use.[28] Parents and guardians should closely monitor alcoholic beverages in the home and ensure underage drinking does not occur at family events. Cities can implement and enforce social host ordinances that increase consequences for parents, guardians, or adults who knowingly permit underage drinking in private settings, such as parties. Cities can also influence the availability and accessibility of alcohol to minors by enforcing regulations focused on commercial availability (e.g., restricting alcohol sales at community events),[29] social/public accessibility (e.g., implementing teen party ordinances, highly visible enforcement of youth access sales laws), and possession (e.g., banning false identification). Further, enforcing geographic buffer zones (e.g., 600 feet[30]) between alcohol outlets and schools or other youth facilities may also reduce the accessibility of alcohol for minors.[31]

3. Enforce Restrictions on Alcohol Marketing to Minors

A substantial body of scientific research establishes a positive link between youth exposure to marketing and early initiation and consumption.[32] Restrictions on marketing ads in public places (e.g., billboards, sporting events, street-front stores) or enforcing signage restrictions at liquor and convenience stores (e.g. no more than 33% of square footage of window ads, specific area for alcohol product placement) can help reduce youth exposure to alcohol marketing.[33,34,35] In addition, restrictions for alcohol ads on social media may also be important in limiting alcohol exposure among youth.

4. Expanding Available Community and Social -Support Programs for Alcohol Consumers and Their Families

Community-wide efforts have been shown to effectively reduce alcohol consumption and its consequences[36] by developing and expanding community programs and social groups to provide emotional support for alcohol drinkers and their families and decreasing stigmatization or discrimination against affected groups or individuals who are struggling with addiction. Through these awareness and educational programs, communities can also help to change social norms about drinking, raise awareness and recognition of alcohol-related harms, and promote alcohol use disorder treatment programs.

Workplaces can play an important role in reducing alcohol-related harms among employees through prevention and intervention programs, such as implementing policies restricting alcohol use in workplaces, creating health and wellness programs, and providing support for screening and brief interventions.[37] These programs may benefit workers and reduce productivity loss.

5. Provide Educational Services for Minors Regarding the Risks of Substance Abuse

Educating the public on recognizing substance misuse and abuse, skills in dealing with alcohol issues and concerns, along with educating on the short-term effects and long-term dangers of alcohol, is a key tool to reduce alcohol use and alcohol-related harms. Schools can provide education-based curricula (e.g., Building Skills, Creating Lasting Family Connections) to help youth develop personal and social skills, to help students identify internal stressors (e.g., fears, anxiety) and external pressures (e.g., peer pressure, advertising) to use alcohol, and to give students the skills to resist these pressures while maintaining relationships.[38] School-based educational programs that have parental or community involvement (e.g., communities Mobilizing for change on Alcohol) can play an important role in reducing alcohol use among youth.[39,40]

6. Increase Screening, Brief Intervention, and Referral to Treatment.

Early screening and intervention are a cost-effective in helping individuals with or at risk of developing alcohol use disorders recognize and avoid problem alcohol use. A substantial body of evidence supports that universal Screening, Brief Intervention, and Referral to Treatment (SBIRT) reduces alcohol consumption and heavy drinking, particularly in the primary care setting. SBIRT for alcohol is recommended by the U.S. Preventive Services Task Force,[41,42] and ranks among the best in return on investment of preventive services.

Although SBIRT can easily be incorporated into clinical workflows, it is currently not commonly practiced in primary care.[43] Health care providers who are unable to directly provide alcohol use disorder treatment should refer patients that screen positive to further assessment and treatment services and follow up with patients to ensure that necessary services were received.

7. Increase Access to Substance Use Disorder Treatment Services.

Alcohol use disorder treatment can be provided in a variety of health settings, including substance use disorder treatment clinics, primary care, or mental health clinics. As such, it is important for health care providers and the community to be aware of where they can receive treatment services for alcohol and other drugs. Importantly, alcohol use disorder treatment is effective and can reduce alcohol-related hospitalizations [44], ED visits, homelessness [45], and motor vehicle accidents [46,] and improve productivity and quality of life.[47] Ensuring access to necessary substance use disorder treatment can help to prevent alcohol-related individual and societal impacts.

In LAC, individuals with alcohol problems, including persons eligible for Medi-Cal or without insurance, can call the Substance Abuse Service Helpline at (844) 804-7500 to find the nearest appropriate treatment centers.

In summary, alcohol outlet densities were significantly associated with a variety of alcohol-related consequences. However, by working together, policymakers, health care providers, schools, and community stakeholders can reduce the burden of these human, economic, and societal repercussions by focusing on strategies to limit alcohol outlet densities, reducing access/availability/marketing to minors, ensuring access to educational services and community/social support programs, and increasing access to necessary substance abuse screening and treatment.

Notes

This is an ongoing report on alcohol density, alcohol-related consequences, and their association in Los Angeles County. Some results from this report may not be comparable to the results from previous reports due to the use of different data sources or measurement methods. This report is subject to limitations due to data availability (e.g., aggregated city level of data based on zip codes, use of de-identified data precludes data verification, potential unknown or unmeasured confounders not controlled for), and thus results should be interpreted with caution. It is also important to note that the impact of COVID-19 on alcohol outlet figures and related consequences in 2020 may differ from the results and figures presented in the 2022 report.

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14. 2022 Population Estimates by Hedderson Demographic Services and Los Angeles County Internal Services Department Social Services Division and retrieved from https://egis-lacounty.hub.arcgis.com/datasets/lacounty::2022-population-and-poverty-at-split-tract/about. Population estimates are based on 2020 U.S. Census population counts and adjusted for projected annual demographic changes in LAC.

15. 2022 Violent Crime data for Los Angeles County were retrieved from three different sources - (1) Los Angeles Police Department (LAPD) Data for City of Los Angeles where the LAPD is the law enforcement agency; (2) Los Angeles County Sheriff's Department (LASD) data for unincorporated areas and 42 cities where the LASD is the law enforcement agency; and (3) Data on all other cities with independent police departments (*n* = 45) were obtained from the California Department of Justice in aggregate count format at the city-level. Violent crimes include homicide/murder, sexual assault (rape and attempted rape), all other assaults (including domestic violence), and robbery.

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