

Alcohol SIP (Shelter-In-Place) Survey

Los Angeles County

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Executive Summary

OVERVIEW

Under the COVID-19 shelter-in-place (SIP) order, California authorities have treated alcohol sales as a priority, enacting a number of “regulatory reliefs” – deregulatory measures intended to facilitate alcohol purchasing. Although the state has justified this as an economic measure, alcohol use has demonstrable effects on public health and safety. Overconsumption of alcohol is implicated in several hazardous outcomes, including accidental injury, violent crime, suicide attempts, and intimate partner violence. Moreover, research suggests that alcohol’s effects on the immune system may predispose individuals to contracting the coronavirus and worsen the outcomes once exposed. To begin to assess these risks, Alcohol Justice and the Institute for Public Strategies (IPS) conducted the Los Angeles County Alcohol Shelter-In-Place (SIP) Survey, an online pilot survey of 218 alcohol-using residents of Los Angeles County to see how these regulations may have impacted drinking behaviors.

Respondents were asked to compare their alcohol use in the year up to the mid-March 2020 SIP order with their alcohol use in “the past 30 days” *during* the SIP order, in May or June 2020.

Findings

- 23.4% of respondents reported binge drinking (defined as a session of 5+ drinks for males, 4+ for females) weekly, multiple times a week, or daily. 28% of respondents reported the frequency of their binge drinking had increased since SIP; males were more likely to report this increase.
- Race and ethnicity were associated with increased frequency of binge drinking. During SIP, 28% of Caucasian respondents engaged in binge drinking weekly or more, compared to 23.6% of Hispanic respondents and 20% of African-American respondents. However, African-American and Hispanic respondents were more likely to have increased their binge drinking after SIP (37% and 38%, respectively). Hispanic or Latinx identity was also strongly associated with increased bingeing (38%).
- 42% of respondents made use of regulatory relief measures (buying alcohol through delivery or to-go from an on-sale licensee). Respondents who made use of regulatory relief measures (buying alcohol through delivery or to-go from on-sale licensees) were significantly more likely to report an increase in binge drinking (38%, vs. 20% of those not making use of regulatory relief).
- Compared to pre-SIP, reports of drinking alone increased nominally, and drinking while socializing via an internet-connected device increased 52%.

- Individuals who changed their alcohol product of preference during the past 30 days were substantially more likely to change to a high-alcohol-content product (wine, liquor, or flavored malt beverages) than to a lower alcohol content product (beer, hard seltzer, or hard cider; 59% versus 41%).

Conclusion

Although the current survey did not find an overall increase in amount of alcohol consumed, high-risk behaviors—binge drinking—increased, particularly among economically distressed residents, as well as residents of African and Hispanic/Latinx descent. These increases were associated with accessing alcohol through means facilitated by deregulation. In addition, possibly to seek “more bang for the buck” under economic duress, many respondents were switching to stronger alcohol products.

This combination calls into question the wisdom of regulatory relief, and demands ongoing monitoring or rollback of such relief, which, in essence, vastly increases the density of off-sale alcohol outlets via alcohol delivery and ‘to-go’ services. While there has always been a need for aggressive outreach to individuals engaged in harmful drinking behaviors, the urgency is compounded by the stressors and risks of the COVID-19 pandemic, particularly among vulnerable populations, since alcohol use itself seems to be a risk factor for both contracting the novel coronavirus and the severity of the ensuing disease. (8)

Introduction

In January 2020, the first cases of the novel coronavirus disease dubbed “COVID-19” were diagnosed in the United States. The virus proved easily transmissible through salivary droplets and spread readily in situations of close interpersonal contact. Due to its virulence and ability to cause long-term debilitating illness in some patients, California officials began urging that local governments intervene and reduce the opportunities for social gathering. (1)

As a public health response, on March 16, 2020, the City of Los Angeles issued an emergency order for all residents to shelter-in-place. As part of this order, all bars and restaurants were closed to on premise customers, and other restrictions that altered shopping behaviors were placed upon grocery and liquor stores.

For alcohol researchers as well as everyone else this created an uncertain situation. Initial reporting suggested that alcohol consumption was spiking or at least that stockpiling was taking place, with many households purchasing in bulk from off-sale outlets in the beginning month of the order. (2) However, the SIP order was extended repeatedly. Although the data are incomplete, the National Institute on Alcohol Abuse and Alcoholism suggests that in many states, beer purchasing began declining as

early as April. (3) In an April 2020 Morning Consult poll, 16% of adults said their drinking had increased, while 19% said it had decreased. (4) Similar results were found in an Australian countrywide survey, where 20.2% of respondents said their alcohol use increased versus 27% saying their use decreased. Women were more likely than men to see their use rise. (5)

Meanwhile, in an effort to protect businesses and jobs within the alcohol industry, the California Department of Alcoholic Beverage Control (ABC) announced it would cease enforcing certain laws that restrict how alcohol can be sold. (6) Restaurants, and later some bars, were allowed to engage in home delivery of prepackaged alcoholic beverages, as well as provide mixed drinks from takeout windows.

It was unclear how widely customers took advantage of these “regulatory relief” notices. However, the essential effect of these relief measures is to vastly increase the density of off-sale alcohol outlets. This density is associated with excessive consumption and a number of concomitant adverse outcomes, including traumatic injury, interpersonal violence, intimate partner violence, and suicide. (7) Moreover, alcohol use itself seems to be a risk factor for both contracting the novel coronavirus and the severity of the ensuing disease. (8)

In a May 2020 letter to *Drug and Alcohol Review*, an international group of researchers led by renowned Jürgen Rehm mapped out two trajectories for alcohol use as a result of lockdown, economic harm, and changes in the alcohol sales environment. The first trajectory predicted that individuals would react to distress, both from economic shock and from emotional trauma surrounding uncertainty and isolation, by increasing their alcohol consumption. The second was that individuals would decrease their use as economic hardship reduced their ability to purchase alcohol. The authors emphasize that these trajectories are not mutually exclusive. (9)

As of the June 29, 2020 completion of this survey, 211,000 cases of COVID-19 had been confirmed in California. This included nearly 6,000 deaths, 54% of which occurred in Los Angeles County. (10) This suggests that shelter-in-place orders should continue, and makes it imperative that public health professionals and policymakers understand the effects of these SIP policies on behavioral health, including consumption of alcohol. The Los Angeles County Alcohol Shelter-In-Place (SIP) survey seeks to inform these groups by performing a pilot assessment of changes in drinking patterns during SIP.

Methods

The questionnaire for SIPS was designed by Alcohol Justice in collaboration with the Institute for Public Strategies (IPS), and under contract to IPS. Alcohol use questions were sourced from the Alcohol Use Disorders Identification Test (AUDIT). Further questions on economic burden were based on those used in Eurocare’s rapid response survey. In addition, the researchers added a battery of questions intended

to evaluate the effects of ABC’s regulatory relief measures. All questions were reviewed by IPS staff. “Typical” alcohol use was framed as being within the past 12 months, but before the SIP order in March 2020. Alcohol-related behaviors during SIP were assessed by asking about the past 30 days.

Inclusion criteria were age \geq 21 years, primary residence within Los Angeles County (including the City of Los Angeles), and at least one drink of alcohol in the past 12 months.

Respondents were recruited between June 1, 2020, and June 25, 2020. Initial recruitment was performed via advertisements on Facebook. However, it proved difficult to validate responses using this method, so the majority of recruitment was conducted via Mechanical Turk (MTurk; <http://www.mturk.com>), a service operated by Amazon. Mechanical Turk distributes surveys to individuals who complete assigned online “tasks,” in this case to complete a survey about alcohol use during SIP. The request was limited only to residents of Los Angeles County, with ZIP code and IP checks used for validation. Unlike traditional online survey distribution via social media advertising, MTurk personnel are incentivized to receive good reviews for their work, minimizing fraud. Respondents recruited via Facebook received a \$5 Amazon e-gift card and the opportunity to enter a drawing for a \$100 card. Because Amazon does not allow requesters to gather email addresses, respondents from MTurk only received a \$5 payment via the service.

The final sample comprised 11 responses gathered through social media and 207 gathered via MTurk.

Results

Demographics

The mean age of the sample was 36 years (95% CI 34.7 – 37.3 years). Demographic details are presented in Table 1. Of the Hispanic or Latinx-identified respondents, 29 (53%) were Mexican or Mexican-American. The respondents were largely married or in long-term partnerships, with only 38% (n=83) reporting being single, separated or divorced. Note that the researchers assessed transgender identity separately from sexual orientation.

Table 1. LAC-SIPS Demographic Characteristics		
	N	%
Gender		
Male	130	59.6

Female	86	39.4
Non-binary	2	0.9
<i>Lesbian, Gay, or Bisexual</i>	28	12.8
<i>Transgender</i>	21	9.6
<i>Race</i>		
African or African-American	30	13.8
Asian	45	20.6
Caucasian	115	52.8
Native American*	9	4.1
Pacific Islander	1	0.5
More than one race	8	3.7
Other	10	4.6
<i>Ethnicity</i>		
Hispanic or Latinx	55	25.2
<i>Income</i>		
Less than \$ 30,000 per year	46	21.1
\$30,000 - \$70,000 per year	106	48.6
\$71,000- \$100,000 per year	32	14.7
\$101,000 - 200,000 per year	32	14.7
\$201,000 - 999,000 per year	2	0.9
<i>Education</i>		

Finished High School	23	10.6
Associate's	21	9.6
Bachelor's	125	57.3
Master's	43	19.7
Doctorate	5	2.3
Other	1	0.5

Recent economic instability was a frequent event within the sample. Over half (51%, n=111) of respondents reported losing income since SIP. Loss of work, through layoff or furlough, affected 26% (n=58).

Drinking Behaviors

Drinking behaviors in the previous year but prior to SIP and in the past 30 days are shown in Table 2. Compared to pre-SIP, 24% of respondents (n=52) reported drinking alcohol less frequently in the past 30 days, compared to 16% (n=34) who reported that they drank more frequently. Over 10% (n=22) reported not drinking at all in the past 30 days. Males were equally likely to have seen a rise (16%, n=21) or decline (16%, n=21) in frequency of drinking. Females, on the other hand, were more likely to decline in drinking frequency, with 36% (n=31) drinking less often vs. 15% (n=13) drinking more often in the past 30 days ($p<0.05$).

Binge drinking (defined as 4 or more drinks in a 2-hour period for women, 5 for men) showed the opposite pattern. Compared to pre-SIP, 28% of respondents (n=60) reported more frequent binge drinking, while 20% (n=44) reported less. Quantity of drinks per drinking session rose between pre-SIP (3.3 drinks/session) and past 30 days (3.7 drinks/session), but the difference was not statistically significant. There was a statistically insignificant trend for males (31%, n=41) being more likely than females (21%, n=18) to experience a rise in binge drinking ($p=0.07$).

Table 2. Pre-SIP vs. Past 30 Days Alcohol Use Behaviors				
	n	%	n	%
	<i>Before SIP</i>		<i>Past 30 days</i>	
<i>Drinking frequency</i>				
Did not drink	7	3.2	22	10.1

Once a month or less	37	17.0	38	17.4
2-4 times per month	89	40.8	70	32.1
2-3 times a week	57	26.1	53	24.3
4 times a week or more	28	12.8	35	16.1
<i>Binge drinking frequency</i>	<i>Before SIP</i>		<i>Past 30 days</i>	
Did not drink	7	3.2	22	10.1
Never	65	29.8	69	31.7
Once a month or less	80	36.7	41	18.8
Several times per month	24	11.0	36	16.5
Weekly or several times per week	34	15.6	38	17.4
Daily or almost daily	8	3.7	13	6.0
Total	218	100	218	100

There was no significant change in frequency of drinking by racial identity. Africans or African-Americans (37%, n=11) and Caucasians (33%, n=38) were more likely to see increases in binge drinking after SIP. Asians, Native Americans, and Pacific Islanders were more likely to see decreases in binge drinking ($p<0.05$). Similarly, Hispanic or Latinx identity was not associated with a change in frequency, but those individuals saw very high increases in binge drinking (38%, n=21; $p<0.05$).

Over a third (37%, n=21) of individuals who drank 2-3 times a week before SIP saw their binge drinking frequency increase, as did 20% (n=24) of individuals who drank 2-4 times per month before SIP. Contrarily, 24% of individuals who reported drinking once a month or less before SIP saw a decrease in binge drinking (in other words, they did not binge drink at all over the past month). However, these findings were not statistically significant ($p=0.1$).

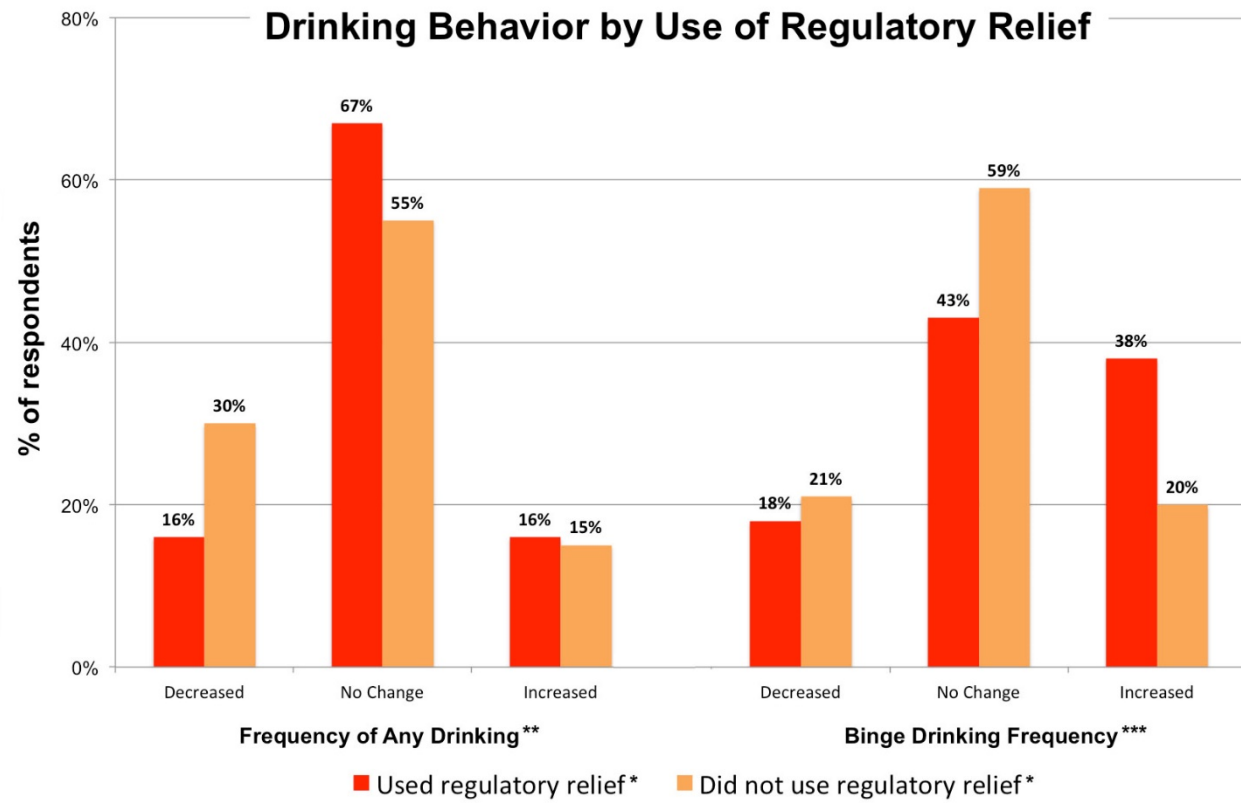
Respondents who purchased alcohol through methods that may have been enabled by regulatory relief (specifically, through delivery or to-go from typically on-sale outlets; n=92) in the past 30 days were also substantially more likely to see an increase in binge drinking. In this group, 38% reported an increase in binge drinking, while 18% reported a decrease ($p<0.05$). Contrarily, among individuals not using regulatory relief, twice as many reduced their frequency of any drinking (30% vs. 15%, respectively), although the results were just shy of significance ($p=0.06$, see

Figure 1).

Socialization changed substantially between pre-SIP and the last 30 days. Respondents reported significant decreases in drinking with friends, drinking at bars, and drinking at professional events. Reports of drinking alone rose slightly in the last 30 days (from 41% to 45% of respondents), and reports of drinking while socializing via the computer, phone, tablet, or video game device increased 52% (from 11% to 17% of respondents).

More than 1 in 3 (n=76) respondents drank alcohol outside of their own home in the past 30 days. Most drinking outside the home was at someone else’s house or a bar or restaurant, although a substantial number reported drinking at parks or beaches, and 15% (n=11) of those who drank outside the home did so on the street.

Figure 1



* Regulatory relief is defined as the ability to purchase alcohol via delivery or to-go from an on-sale outlet.
 ** p=0.06. *** p<0.05

Purchasing behaviors

The SIP order may be associated with a move in consumer preference towards slightly stronger alcohol products. Of the 30% of respondents (n=59) who switched their product of choice between pre-SIP and the past 30 days, 59% of them (n=35) switched to hard liquor, wine, or flavored malt beverages, all relatively higher- alcohol products than the beer, cider, or hard seltzer that the other 41% switched to ($p<0.05$).

After SIP, nearly all alcohol purchasing behaviors declined. In the past 30 days, individuals have been 46% less likely to purchase from bars or restaurants than before SIP. Respondents also seemed less likely to purchase alcohol from large liquor wholesalers or “big box” stores such as Target or Walmart. Corner stores (8%) and grocery stores (16%) experienced smaller declines. Only online purchasing increased.

Fewer than half of the respondents (42%; n=91) took advantage of ABC’s regulatory relief measures. Only 37% (n=81) got any sort of alcohol through delivery. Of those who took advantage of delivery services, 43% got delivery from a store and 40% from a bar or restaurant. Another 40% ordered alcohol online. Fewer than 14% of individuals receiving alcohol delivered reported using a phone-based delivery app like Drizly or Grubhub.

Regulatory relief also allows individuals to purchase alcohol to-go from bars and restaurants, which 27% of respondents (n=59) took advantage of. Around 18% (n=39) of respondents picked up alcohol at a drive-through restaurant window, while 14% (n=30) got it from the drive-through window of an off-sale retailer.

Discussion

The SIP order seems to have been a double-edged sword in terms of alcohol prevention. While the overall frequency (and possibly volume) of drinking in Los Angeles County has declined, the incidence of binge drinking may have increased. Males, Africans or African-Americans, Caucasians, and individuals of Hispanic or Latinx descent seem most at risk for binge drinking. Males were also less likely to see a decrease in frequency of drinking compared to females.

Some of these findings are at odds with statewide findings, which suggest that African racial identity and Hispanic/Latinx ethnicity are actually protective against alcohol use. (11) It could be that it is the short-term shock—whether in the immediate aftermath of loss of income, or deriving from broader distress accompanying the COVID-19 pandemic and recent civil unrest, or from social isolation due to SIP—that triggers harmful use. Efforts to increase outreach and health promotion among this population specifically during times of economic duress may mitigate unhealthy drinking episodes. The increase in drinking while socializing through alternate means, particularly online, also suggests a relatively unexplored medium for health promotion messaging.

On the other hand, the increase in risky drinking may be a reflection of a greater societal trend. Overall, United States residents who drink are drinking in more dangerous ways. (12) Aside from the concerning finding that over a quarter of respondents reported binge drinking more frequently, there was a notable though statistically insignificant trend for individuals who had been more frequent drinkers over the course of the year also being the most likely to binge more, while occasional drinkers were likely to cut down even further. This “great sort” describes a prevention challenge, since the people who were already drinking frequently are likely ones who were harder to reach with behavioral health messaging.

This high-risk cohort may be placed at further risk by ABC’s decisions regarding regulatory relief. Nearly as many individuals getting alcohol to-go or via delivery reported an increase in binge drinking as reported no change (38% vs. 43%), whereas individuals not using relief were slightly more likely to see a decrease in binge drinking. While it is important to note that these findings are not causal, previous research demonstrates a clear link between alcohol availability policies and binge drinking. (13)

The increase in binge drinking among individuals already vulnerable to dangerous drinking patterns is compounded by a noted shift towards stronger alcohol products. This may be an attempt to get “more bang for your buck” as individuals lose income, but raises the concern that these products may encourage more servings of alcohol per drinking session. Since hazardous alcohol use patterns are implicated in both behavioral inhibition and susceptibility to infection, (8) the current pandemic makes it even more important that health promotion efforts reach that population.

Nonetheless, it should be emphasized that there were a considerable number of respondents who reduced their drinking. Nearly 1 in 4 respondents reported drinking less after SIP, and 1 in 5 binge drank less. Continued monitoring and research may be necessary to determine what predicts a drop in drinking, and how these individuals can be supported to maintain healthier habits.

As for efforts to economically shore up alcohol sellers through regulatory relief, although there has been some uptake, it has been surprisingly slim and could perhaps be better validated through sales data or surveys. This could be an artifact of the sample, of whom the majority had lost income. In those situations, the upcharge (i.e. price increases) associated with nearly all of the ABC’s regulatory relief concepts may be a substantial disincentive.

Of particular note, respondents’ general avoidance of delivery apps may be a particular blessing, since ABC itself has admitted that drivers for those apps are frequent violators of laws surrounding alcohol sales, and has moved towards tougher oversight. Despite the limited uptake, the alcohol industry will almost certainly use the economic distress faced by small business owners to appeal for the continued liberalization of alcohol laws, as they are already doing in other states. It is important

to push back against these efforts by noting that deregulation is not an economic panacea, and that even with decreased sales, we are seeing individuals drinking in ways more likely to cause them harm.

It should be emphasized that bars and restaurants had a limited reopening while this survey was still underway. Because the situation is so changeable, continued monitoring is warranted to see if alcohol trends are following one or both of the trajectories described by Rehm and colleagues. (9) What is certain is that the current sample suggests concerning trends around binge drinking in particular, suggesting a human cost to efforts to buoy the economy through alcohol deregulation.

Limitations

The heavy use of Mechanical Turk creates idiosyncratic samples. (13) Although the sample was large and diverse enough to find meaningful effects, Hispanic/Latinx respondents were severely underrepresented compared to the demographics of Los Angeles County. Because Mechanical Turk allows respondents to make money as independent contractors, it is frequently a revenue source of last resort. This may have skewed the sample towards lower-income or more economically impacted individuals. The sample also skewed male, an effect that is seen frequently in surveys that are collected entirely online.

The fact that data were collected during June 2020 also created an irreplicable environment. It is not clear how quickly drinking behavior is evolving under SIP, but public health orders are constantly evolving and a June sample may have major differences from one taken in April or July. This is compounded by the fact that June marked a major wave of social unrest in many urban areas, including Los Angeles. It is impossible to say what effect this may have had on alcohol use.

Lastly, the number of responses identifying as transgender was remarkably high. This could also be an effect from Mechanical Turk. The service may be of particular value to individuals who do not feel safe in the workforce or who have otherwise suffered economic or social discrimination.

Conclusion

SIP has created a retail and social environment the likes of which no U.S. public health official has seen before. Within Los Angeles County, this environment has resulted in increased binge drinking among economically distressed residents, as well as residents of African and Hispanic/Latinx descent. More broadly, individuals who were inclined to drink before now seem inclined to drink in more dangerous ways. As this is accompanied by ostensibly temporary alcohol law liberalization, the public health community should be proactive in reaching affected members of the community before dangerous drinking patterns manifest as personal harm. Shelter-in-Place combined with untested or haphazard regulatory relief has numerous public health effects on drinking behavior that deserve further study. Nevertheless, this study raises cautions against permanent relief policies, and indicates numerous avenues of harm to demographic sectors.

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