

Effects of partial bans on off-premises sales of alcoholic beverages on Emergency Department admissions in Lausanne, Switzerland.



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BACKGROUND:

- Unhealthy alcohol use is a major public health problem.
- It notably leads to an important number of emergency department (ED) admissions.
- Structural measures, such as restricting the access to alcohol, can have an impact on alcohol use and possibly on ED admissions.
- Reducing alcohol availability is among the World Health Organisation recommended measures to reduce alcohol related harm
- One option is to reduce temporal access to alcohol

AIM:

- To assess the potential impact of two measures limiting access to alcohol introduced in Lausanne on admissions in the Emergency Department.

The two measures limiting the temporal access to alcohol were:

- 1) a ban on off-premises sales for all alcoholic beverages Friday-Saturday after 8PM, introduced in September 2013, modified in July 2015 to
- 2) a ban on off-premises sales for alcoholic beverages except for wine on all days of the week after 8PM.

METHODS:

- Using monthly admission data from 2012-2016*, a transfer function time series model was used to check for the association between the two bans on off premises sales and the percentage of ED admissions with positive blood alcohol content (BAC) to the Lausanne University Hospital ED
- Analyses were conducted by age group: 16-29, 30-44, 45-59, 60-69, 70+.

*de-identified centralized data from the hospital admission system

RESULTS:

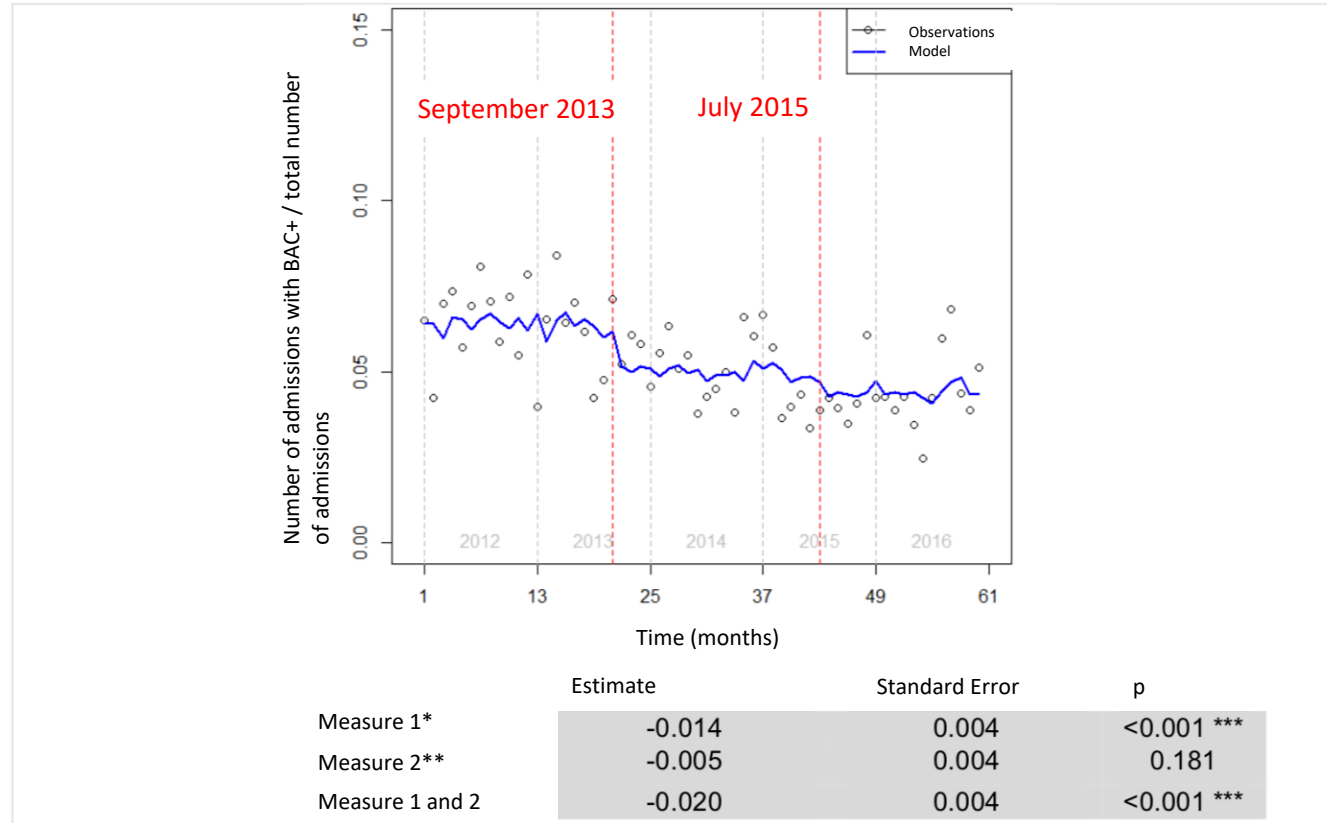
- The total of admissions at the ED was 34431 in 2012 and 38458 in 2016
- The total of admissions with positive BAC was 1628 in 2012 and 1484 in 2016
- The percentage of admissions with positive BAC was 4.73% in 2012 (1628/34431 admissions) and 3.86% (1484/38458) in 2016.

		2012	2013	2014	2015	2016
16-29 y.o.	# admissions with positive BAC	503	449	403	347	357
	Total # admissions	7595	7477	7945	7838	8077
	% of admissions with positive BAC	6.6%	6.0%	5.1%	4.4%	4.4%
30-44 y.o.	# admissions with positive BAC	413	371	409	428	402
	Total # admissions	7293	7477	7934	8029	8058
	% of admissions with positive BAC	5.7%	5.0%	5.2%	5.3%	5.0%
45-59 y.o.	# admissions with positive BAC	422	408	405	397	411
	Total # admissions	6655	6776	7022	7144	7540
	% of admissions with positive BAC	6.3%	6.0%	5.8%	5.6%	5.5%
60-69 y.o.	# admissions with positive BAC	156	163	165	168	157
	Total # admissions	3836	3968	3790	4098	4161
	% of admissions with positive BAC	4.0%	4.1%	4.3%	4.1%	3.8%
70+	# admissions with positive BAC	134	116	151	132	157
	Total # admissions	9052	9390	9811	10136	10622
	% of admissions with positive BAC	1.5%	1.2%	1.5%	1.3%	1.5%

RESULTS:

- Among 16-29 y.o. there was a significant decrease in BAC+ admissions associated with the two measures
 (measure 1: b(SE): -0.014 (0.004), $p < .001$; measure 2: b(SE) -0.005 (0.004), $p = 0.2$; measures 1 and 2: b(SE): -0.020 (0.004), < 0.001).
- There was no significant association for the other age groups.

Percentage of BAC+ admissions, 16-29 y.o., January 2012 – Dec 2016



*RHOM: révision du *Règlement communal sur les heures d'ouverture et de fermeture des magasins* (Lausanne), Sept 2013
 **LADB: révision de la *Loi sur les auberges et débits de boisson* (Vaud), July 2015

CONCLUSION:

- Measures restricting access to alcohol are associated with a decrease in ED admissions with positive BAC among young individuals
- Temporal restrictions in access to alcohol could represent an efficient option to reduce alcohol related harm.
- Nevertheless, the observational nature of the study does not allow to conclude to a causal association between the introduction of the measures and the decrease in ED admissions.

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