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The BMJ Press Release

Laws limiting alcohol sales may have measurable public health effects

First study to use differences in alcohol sales laws as a predictor of disease

Residents in Texas counties that permit the sale of alcohol have a higher incidence and prevalence of alcohol misuse, liver disease and some heart problems, but fewer heart attacks, compared to residents in counties with alcohol restricting laws, finds a study published by **The BMJ** today.

It is the largest study to focus on the relation between alcohol use and cardiovascular disease, and shows that laws restricting alcohol sales may have measurable public health effects that may be both beneficial and harmful.

The authors say the “results have health implications relevant to people with and at risk for various types of cardiovascular disease.”

Alcohol is one of the most widely consumed drugs, and heart disease is the most common cause of death worldwide.

Previous studies suggest that alcohol consumption may be associated with both a greater risk for some cardiovascular disease and lower risk for others, but these have mostly relied on self reported alcohol use, which is not necessarily reliable, and have generated conflicting results.

So a team of researchers based at the University of California, San Francisco investigated the relation between alcohol consumption and cardiovascular disease by using differences in Texas county level alcohol sales laws.

Texas is the most populous US state to enact laws restricting alcohol sales. A patchwork of counties exists where alcohol sales are allowed, known as 'wet counties', and some where such sales are restricted, known as 'dry counties.'

By analysing information from the Texas Alcoholic Beverage Commission, the researchers identified 29 counties as 'dry' (where alcohol sales are completely restricted), 47 counties as 'wet', and seven counties changed from 'dry' to 'wet' between 2005 and 2010.

During the same period, they found that 1,106,968 patients aged 21 or older were admitted to hospital in the state, using data from the Texas Department of State Health Services.

Results showed that the incidence and prevalence of alcohol misuse and alcoholic liver disease was significantly greater among hospitalised residents of wet counties than in dry counties, even after adjusting for factors, such as, age, race, ethnicity, and sex.

There was also a higher prevalence and incidence of atrial fibrillation (an irregular heartbeat), but a lower prevalence and incidence of heart attacks and congestive heart failure.

Hospitalised residents in the seven counties going from 'dry' to 'wet' during the study period also had a significantly higher prevalence and incidence of alcohol abuse, liver disease, atrial fibrillation and congestive heart failure, but there was no difference in heart attacks.

This is an observational study so no firm conclusions can be made about cause and effect, but the authors say the “results have health implications relevant to people with and at risk for various types of cardiovascular disease.”

In a linked editorial, Kenneth Mukamal and Eric Ding from Harvard Medical School say this latest study provides fresh insights using a novel approach, but more certainty is needed.

They explain that the “possible health benefits of alcohol consumed within recommended limits continue to cause extraordinary controversy,” and that only a randomized trial of alcohol consumption will be able to answer questions, because of limitations with observational studies.

“All interested parties should press for such a trial quickly and wholeheartedly. It is time to move forward,” they conclude.

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Notes to Editors:

Research: Access to alcohol and heart disease among patients in hospital: observational cohort study using differences in alcohol sales laws

<http://www.bmj.com/content/353/bmj.i2714>

Editorial: Pinpointing the health effects of alcohol

<http://www.bmj.com/content/353/bmj.i3043>

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