

This entry is our account of a review or synthesis of research findings selected by Drug and Alcohol Findings as particularly relevant to improving outcomes from drug or alcohol interventions in the UK. Unless indicated otherwise, permission is given to distribute this entry or incorporate passages in other documents as long as the source is acknowledged including the web address http://findings.org.uk. The original review was not published by Findings; click on the Title to obtain copies. Free reprints may also be available from the authors – click Request reprint to send or adapt the pre-prepared e-mail message. Links to source documents are in blue. Hover mouse over orange text for explanatory notes. The Summary is intended to convey the findings and views expressed in the review. Below are some comments from Drug and Alcohol Findings.

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# ▶ Effectiveness of policies maintaining or restricting days of alcohol sales on excessive alcohol consumption and related harms.

Middleton J.C., Hahn R.A., Kuzara J.L. et al.

American Journal of Preventive Medicine: 2010, 39(6), p. 575–589.

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International research from developed nations offers some support for the belief that allowing or disallowing Saturday or Sunday alcohol sales and service affects drinking and alcohol-related harm.

**Summary** International bodies have recommended controlling hours and/or days when alcohol sales are permitted as way of reducing excessive alcohol consumption and related harms. Such measures are thought to work by altering the availability of alcohol and also as a result leading consumers to change their purchasing habits including how much they buy and when and where. In turn these changes may affect drinking patterns or overall levels, resulting in changes in alcohol-related problems. Changes in drinking may not be the only way hours of sale affect alcohol-related health. For example, more days of drinking offer more days when concentrations of drinkers in pubs and bars raise the risk of alcohol-related aggression. Changes in days and/or hours may also or divert drinkers to less restricted areas with consequent displacement of drinking and related harm, and perhaps extra harm due to more driving and more drink-driving.

A separate review has assessed the effects of changing *hours* of sale, concluding that at two hours or above, increases in on-licence opening hours lead to increased consumption and related harms. The question addressed by the featured review was how changes in the *days* of the week during which regulations allow alcohol to be bought and served affects excessive alcohol consumption and related harms.

Results of reviewed studies had to be published in English and reflect non-transient changes in days (eg, not for a special one-off event) in high-income economies when these were the sole intervention affecting drinking and related harm rather than part of a combined programme. Trends in drinking and related harm had to be benchmarked against a comparison area not subject to changes in days or against the same area

before the changes.

### Main findings

Fourteen studies were found. Seven concerned increased days of service at *on-premises* outlets such as pubs and bars, all but one concerned solely with effects related to motor vehicles and driving. The exception investigated the 1977 law allowing Sunday alcohol sales in the four major cities and within the central belt of Scotland. It found significant increases in consumption among men including 2.4 UK units (19g alcohol) more per week among men aged 18 to 45, but none among women, and the proportion of the population drinking on Sunday itself increased only slightly and non-significantly. Five studies (four in Australia and one in the USA) examined the impact of allowing Sunday on-premises sales on indicators of alcohol-impaired driving on that day of the week, recording generally significant increases in deaths, crashes and arrests for drink-driving.

Four studies conducted in Sweden and the USA concerned increased days of sales (permitting Sunday or Saturday sales) at *off-licensed* premises where alcohol is sold for consumption elsewhere. Generally they found significantly increased per capita consumption but less clear links with harm: assault rates were not significantly affected, and there were equivocal impacts on drink-driving. When New Mexico allowed Sunday sales, alcohol-related crashes and resultant deaths clearly increased on Sundays [Editor's note: and were not compensated for by reductions on other days]. The increase in drink-driving arrests when Sweden allowed Saturday sales was significant only in the pilot phase and not when the law was extended nationally. It was suspected that the initial increase was an artefact due to more intense policing.

Three studies investigated the reverse process – banning Saturday or Sunday off-licence sales in Sweden, Norway and New Mexico. In Sweden assaults, domestic disturbances and incidents of drunken people being dealt with by the police all fell on Saturdays with no countervailing increases on other days. Later, in some communities Norway experimented with banning Saturday sales from its state spirits and wine monopoly stores, though beer remained available. Compared to matched communities, drinkers consumed less alcohol from wine and spirits but more from beer, summing to a small net increase. Domestic altercations and arrests for drunkenness fell but reports of violence increased. Finally, after Sunday sales were allowed, some New Mexico communities took the option of reinstating the ban locally. If they did so rapidly, their counties experienced lower increases in alcohol-related crashes after Sunday sales were allowed than other counties in the state.

#### The authors' conclusions

This review found that increasing days of sale by allowing previously banned alcohol sales on either Saturdays or Sundays increased excessive alcohol consumption and related harms, including motor vehicle crashes, drink-driving, police interventions against drunk people, and, in some cases, assaults and domestic disturbances. The implication is that maintaining existing limits on Saturday or Sunday sales – the situation against which increases were benchmarked in these studies – can avert the alcohol-related harms which would happen if days of sale were extended.

In respect of the reverse process – reducing days of sale – a study of a Saturday ban in Norway showed mixed effects, whereas a study of the imposition of a Saturday ban in

Sweden and one of the reversal of a lifted ban in New Mexico found a decrease in alcoholrelated harms.

According to the Community Guide's rules of evidence, this body of work constitutes strong evidence that maintaining limits on days of sale prevents alcohol-related harms. These studies also offer some evidence that imposing limits on days of sale can reduce alcohol-related harms.

communities on health-related programmes. The reviews are considered by a task force with particular expertise in public health, which takes their finding in to account in making its recommendations. The task force considered this review and another on changes in the hours on which alcohol can be sold. On the basis of "strong evidence of effectiveness" from the featured review, it recommended maintaining existing US limits on the days on which alcoholic beverages are sold as one strategy for the prevention of excessive drinking and related harms. The task force judged the evidence "sufficient" to also recommend similar actions for similar reasons in relation to the hours during which alcohol can be sold at on-premises outlets.

The task force was concerned with impacts on "excessive" alcohol consumption, but the featured review reported on impacts on total or per capita consumption. Presumably the presumption is being made that overall increases also mean increases in the proportion of the population drinking excessively and/or in the intensity of drinking by excessive drinkers. That presumption is reasonable but by no means certain. Though in relation to off-licence sales the evidence for increased consumption is quite consistent, and such increases may to lead to increased alcohol-related problems, direct evidence of increased harm seems relatively weak. In relation to *increased* days, it rests largely on findings from New Mexico, which in the light of a later US-wide study have been revealed as atypical. In relation to decreased days, it also rests partly on evidence from New Mexico which may be similarly atypical. More convincing are findings from Sweden, but findings from that country with its state alcohol monopoly stores and strict regulations may also not typify those to be expected elsewhere. Details below.

Though it found UK evidence equivocal, Britain's National Institute for Health and Clinical Excellence also concluded that as well as reducing the number of outlets, making it harder to buy alcohol by limiting days and hours when it can be sold effectively reduces alcohol-related harm.

### Weak evidence for an impact of days of off-licence sales

The suspicion that the increase in drink-driving arrests after Sweden piloted Saturday off-licence sales was an artefact due to more intense policing was supported by a later analysis from the same authors, though it has been argued that changes in alcohol import limits during the time when the two Swedish studies were conducted would have obscured the consequent increase in drinking and with it resultant alcohol-related harm.

Whatever the truth of that contention, of those included in the review, it leaves only the New Mexico study finding clear increases in drink-driving consequences as result of extra days of off-licence sales, in this case confirmed by blood tests on those killed in traffic accidents. However, a later study suggested that in this respect New Mexico was atypical. Of the 14 US states which relaxed or repealed their bans on the Sunday off-licence sales, only the repeal in New Mexico led to more deaths. It seems this was because there the repeal led

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to larger increases in drinking than elsewhere, coupled with the facts that New Mexicans drive relatively more and their traffic fatalities are more likely to involve alcohol. The evidence in relation to New Mexico communities which rapidly reinstated the ban is suggestive of a protective effect, but this was not subject to statistical tests of significance, and it seems possible that the few communities which rapidly took up this option differed in other ways from the communities which did not.

This draft entry is currently subject to consultation and correction by the study authors and other experts.

Last revised 05 February 2012

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