ALCOHOL DRUG FINDINGS *Research analysis*



This entry is our analysis of a study considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original study was not published by Findings; click Title to order a copy. Free reprints may be available from the authors – click prepared e-mail. Links to source documents blue. Hover mouse over orange text for explanatory notes. The Summary conveys the findings and views expressed in the study. Below is a commentary from Drug and Alcohol Findings.

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## Tackling risky alcohol consumption in sport: cluster randomised controlled trial of an alcohol management intervention with community football clubs.



**Kingsland M., Wolfenden L., Tindall J. et al.**

**Journal of Epidemiology and Community Health: 2015, early online publication**

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*Playing team sports is associated with heavy drinking, but through an alcohol management code voluntarily entered in to and policed by sports clubs themselves, this unique randomised trial from Australia claims to have found a way to turn the tide without having to strengthen formal enforcement.*

**SUMMARY** Attracting many young people, sporting clubs offer an opportunity to reduce alcohol-related harm, yet clubs and venues have not implemented evidence-based measures comprehensively and consistently, and there is little rigorous scientific evidence on the effectiveness of their efforts.

This Australian study conducted in New South Wales aimed to provide evidence by evaluating the impacts in non-elite, community football clubs of a multi-strand alcohol management intervention. Unlike previous studies, clubs were randomly allocated to the intervention package or to carry on as normal, helping eliminate other influences in order to reveal the true impact of the intervention. This account of the study draws also on a description of its methodology and an evaluation of the implementation of the intervention.

**Key points**
**From summary and commentary**

In Australia football clubs which supplied alcohol were randomly allocated to implement the Good Sports alcohol management regimen or carry on as usual

Over the three years of the study, generally risky drinking levels had fallen more among members of Good Sports clubs than of comparison clubs, suggesting the programme had the desired impacts.

The results suggest the kind of non-enforcement based strategies favoured by the alcohol industry and some governments can work.

However, study and results are not enough to overturn evidence that voluntary community-based alcohol control is most likely to succeed when backed by mandatory enforcement measures.

The intervention package was based on the Good Sports programme widely implemented in Australia. Described as a non-enforcement policy option, the programme is voluntarily entered in to by clubs and does not feature external enforcement pressures or regulatory measures. As part of the programme clubs which serve alcohol agree to measures including: limiting availability of high-strength drinks; providing free water, food and relatively inexpensive low-alcohol and alcohol-free beverages; not selling alcohol to drunk patrons; prohibiting drinking games and promotions including cheap or discounted drinks or alcohol-only awards or prizes; not allowing bar staff to drink on duty; and ensuring the licensee is present when alcohol is sold. Measures to alter the environment include signage on liquor laws and what constitutes a standard drink, and routine patrolling of grounds to monitor drinking and inform spectators of expectations regarding drinking at the venue. Clubs can gain level-one accreditation for their programmes by implementing basic measures and higher levels two and three by taking further steps, the last stage including trying to source non-alcohol related sponsorship and providing a written alcohol-management policy to members and staff/volunteers.

All community-level football clubs in the area of the study which sold alcohol and had over 40 members, and which did not currently run an alcohol management improvement programme, were invited to join the study. A determined recruitment drive led to 88 of 244 such clubs joining. Supported and monitored by the research project, they were allocated at random to implement the study's programme over two and a half sporting seasons between 2010 and 2012, or to act as control clubs left to carry on with their normal procedures.

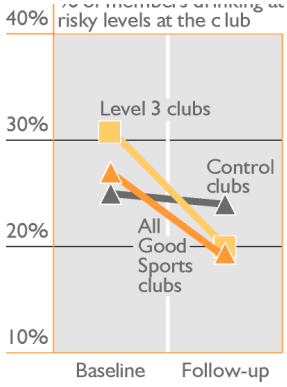
To assess the impacts of the programme on drinking, each club was to ask 30 quasi-randomly selected adult members to participate in the study and provide the researchers contact details for those who agreed. To establish a pre-intervention drinking baseline, in 2009 researchers interviewed 1411 of these members from 71 of the 88 clubs, typically men in their 30s who played football at clubs in major cities; another 200 members refused or could not be contacted. About three years later a similarly selected set of members were surveyed after the programme had been implemented, when 1144 members from 80 of the 88 clubs provided data; another 834 refused or could not be contacted. At both times members were asked about how much they drank at the club, and (using the brief AUDIT questionnaire) about their overall drinking and related problems. At issue was whether between baseline and follow-up, drinking and related problems fell or at least increased less steeply among members of clubs allocated to the Good Sports programme versus the remainder. If they did, it would be evidence that the programme had restrained drinking at the clubs and reducing overall risk of alcohol-related harm.

### Main findings

Consistent with the programme having had the desired impacts, generally risky drinking levels had fallen more steeply in Good Sports clubs than in control clubs.

Between baseline and follow-up, at control clubs the proportion of members who said they drank five or more standard drinks at least once a month at the club (the study's cut- | % of members drinking at

more standard drinks at least once a month at the club (the study's cut-off for risky drinking) remained virtually static at 25% and 24%. In contrast, at Good Sports clubs the proportion fell from 27% to 19%, creating a statistically significant difference in trends favouring the Good Sports programme ▸ chart. Though still evident, this difference (at follow-up, 22% at control clubs versus 18% at Good Sports clubs) no longer met the criterion for a statistically significant difference when it was assumed that members at the eight clubs missing from the follow-up had continued to drink at the clubs' pre-intervention levels.




By the follow-up 25 of the 43 Good Sports clubs had reached the highest level (level three) of accreditation, implementing all programme components. At these clubs the proportion of members regularly drinking at risky levels at the club had fallen from 31% to 20% ▸ chart. Most clubs were in major cities, and among these there was no statistically significant effect of being allocated to the Good Sports programme. In contrast, among the 15 more rural clubs which participated in the follow-up, the proportion of risky drinkers rose in control clubs from 19% to 32%, but fell in Good Sports clubs from 37% to 20%, a statistically significant difference in trends.

Measures of overall drinking and related problems whether at the club or not also favoured the Good Sports clubs. Like risky drinking at the club, at 46% and 45% the proportion of control club members whose AUDIT questionnaire scores indicated risky drinking remained virtually static, but fell from 54% to 38% at Good Sports clubs, a statistically significant difference in trends. Similar trends were seen with typical AUDIT scores at the two sets of clubs and AUDIT subscales indicative of amount drunk, risk of dependence and risk of alcohol-related problems.

### The authors' conclusions

Findings suggest the intervention can help reduce risk of alcohol-related harm among the large numbers of sports' players, fans and officials. Seemingly the first randomised trial to demonstrate the effectiveness an alcohol management intervention without enforcement, the findings are also more generally relevant to management of drinking in public venues, offering a non-enforcement option for governments seeking to reduce alcohol-related harm. Possibly the accreditation-based nature of the intervention motivated a change in alcohol management practices without need for formal enforcement.

Risk-reduction was seen not just in respect of drinking at the club but in overall drinking, suggesting that the club was for these members where risky drinking tended to occur, or that the intervention's impacts 'spilled over' to drinking in general.

However, in respect of the primary outcome – risky drinking at the club – results became statistically insignificant under the worst-case-scenario assumption that members at clubs missing from the follow-up had continued to drink at the pre-intervention levels typical of their clubs, indicating that further studies are required to confirm the programme's effectiveness.

**FINDINGS COMMENTARY** The featured study is seen by the Good Sports organisation as having made its sports programme the "first ... in the world proven to prevent alcohol-related harm" ▸ illustration from web site.


If that was the case, it would importantly counter the association between heavy drinking and participation in male-dominated team sports like football. Good Sports has gained considerable traction in Australia, and is being seen as showing that stronger enforcement of licensing and other relevant laws is not necessarily (as it seemed from previous studies: 1 2) an essential or key component of effective alcohol control strategies. But despite its great strength – random allocation – there are reasons to doubt both the robustness of the key finding on risky drinking at the clubs and the generalisability of the findings to clubs in general; more below.

### Were the findings due to chance variations between baseline and follow-up?

Light-touch voluntary measures may be welcome to the alcohol industry, governments trying to avoid a kill-joy reputation, and to those responsible for licensed premises, but have so far had a poor record unless backed by the realistic possibility of enforcement. Despite its great strength – random allocation of clubs – the featured study's results are for several reasons not enough to overturn evidence (and nor do the authors claim it is) that voluntary community-based alcohol control is most likely to succeed when backed by mandatory enforcement measures. Its findings may have been due not to the programme but to chance variations in the clubs and members surveyed at baseline and follow-up, and even if valid, cannot be assumed to apply to most clubs and members. As the authors acknowledge, more studies are needed before the findings can be relied on to guide practice.

In their published report the study's authors were more circumspect than the Good Sports organisation, pointing out that when they included all the clubs in the analysis by assuming pre-intervention drinking levels at missing clubs, the difference in trends on the primary outcome of risky drinking at the club failed to reach statistical significance, meaning chance variations could not be ruled out. Often this kind of analysis which makes reasonable (though in this case, worst-case) assumptions in order to include all the participants is the preferred way to evaluate an intervention. Had this been the case in the featured study, the analysts would had to have declared the programme unproven.

One way chance variations could have accounted for the results is what happened in the relatively few clubs outside major cities. These were too few for the study to make a definitive finding about impacts in these areas, but still findings from these clubs affected overall results. For some reason, in rural control clubs the proportion of members who reported risky drinking at their clubs increased from 19% to 32% over the course of the study, proportionately a 68% increase. Adding to the puzzle is that it

to 32% over the course of the study, proportionately a 68% increase. Adding to the puzzle is that it seems (but from data collected 8 to 13 months earlier) that at these clubs there had been no relaxation in alcohol management practices which might account for the increase in risky drinking. Possibly this apparent increase was due to a chance difference between which clubs participated in the follow-up and which at baseline, and/or in which of their members supplied data at these times. Whatever the cause, it helped create a statistically significant difference between trends at these clubs and those allocated to the Good Sports programme, and seems to have been a major contributor to the overall findings. Without these more rural clubs, again the analysts would had to have declared the programme unproven.

**What the Good Sports programme was up against: drinking 'games' in a rugby club**

The surprising good news from the study was that not only was risky drinking at the club affected, but there was an even greater impact on risky drinking in general. However, it could be argued this strengthens suspicions that chance variation or some factor other than the Good Sports programme accounts for the findings. Members who participated in the study typically attended their clubs only once a fortnight for a 'home' game. It seems improbable that this fortnightly encounter with somewhat stricter alcohol management practices so strongly affected the members' drinking outside the clubs, especially since differences between the alcohol management practices at control and Good Sports clubs seemed minor compared to their commonalities.

One explanation would be that outside the clubs members drank little, so overall drinking largely reflected in-club drinking, but this seems belied by average AUDIT alcohol consumption scores. It seems at least as believable that rather than the Good Sports programme, differences in which clubs participated in the follow-up and which at baseline, and/or in which of their members supplied data at these times, accounted both for trends in drinking at the clubs and drinking more generally. Also, it is unclear whether the statistically significant differences in general drinking and related risk would have survived an analysis which included all the clubs, including those which did not participate in the follow-up.

### Findings were from self-selected clubs and members

Scope for differences in clubs and members being the reasons for the findings is apparent in the fact that at both baseline and follow-up many members invited to join the study were not surveyed. At baseline from 88 clubs which agreed to join the study the intention was to invite 2640 members to participate. In the end 1726 ended up being screened by researchers to see if they met the study's criteria and 1411 from 71 clubs completed the baseline survey. At follow-up just 58% of the members eligible for the study from 80 of the 88 clubs participated. Clubs selected members to pass on to the researchers. Sensitised to drinking problems at their clubs, those in the Good Sports programme had the chance to select out members who would make their efforts to control drinking look ineffective.

These figures also cast doubt on the extent to which the findings can be generalised to all the members of all 88 clubs. More seriously, these clubs were themselves only just over a third of the clubs eligible for the study. Many more – 103 – refused, and another 97 could not be contacted. Endemic to prevention research, this selection process means that even if valid, the results can be assumed to apply only to the minority of clubs prepared to join such a study and consider implementing a Good Sports programme, and the barely more than half of their members prepared to supply data to such a study. That leaves impacts on the great majority of clubs and members unclear.

In some respects the intervention tested in the study went beyond normal implementation of the Good Sports programme. Clubs were given 1000 Australian dollars to spend on the programme and how well they implemented it was monitored by the researchers. Because the study excluded clubs which already had an alcohol management improvement programme, its findings are relevant to whether having such a programme reduces risky drinking, not whether the tested programme is preferable to alternatives.

*Thanks for their comments on this entry in draft to research author Melanie Kingsland of the University of Newcastle and Hunter New England Population Health in Australia. Commentators bear no responsibility for the text including the interpretations and any remaining errors.*

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