THE ALCOHOL ACTION IN RURAL COMMUNITIES (AARC) PROJECT:

Detailed description of the interventions and their costs

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Monograph Number: 64
ISBN: 978-0-7334-3327-6

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NDARC Monograph N0: 64

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THE ALCOHOL ACTION IN RURAL COMMUNITIES (AARC) PROJECT

AARC is a partnership between local communities, local government, government agencies, the Foundation for Alcohol Research and Education (FARE), the Universities of New South Wales and Newcastle, and the National Drug and Alcohol Research Centre (NDARC).

Funding was provided by the Foundation for Alcohol Research and Education (FARE). This monograph provides a detailed description of the interventions and their costs, and the research outputs from the AARC project.

The full list of contributors to this project are listed in the acknowledgements section of this technical report, but particular thanks to the 10 experimental communities who willing engaged with the project, including the Mayor of each community who actively supported and promoted AARC. The project was funded by the Foundation for Alcohol Research and Education (FARE), an independent charitable organisation (http://www.fare.org.au/about-us/). The Australian Government provides core funding to the National Drug and Alcohol Research Centre through the Substance Misuse Prevention and Service Improvement Grants Fund.

Information on the range of descriptive analyses, the intervention outcome analyses and the benefit-cost analyses are available at:

1. Shakeshaft A, Doran C, Petrie D, Breen C, Havard A, Abudeen A, Harwood E, Clifford A, D'Este C, Gilmour S and Sanson-Fisher R. The effect of community-action in reducing alcohol-related consumption and harms: a cluster randomised controlled trial. *Under review.*
2. Doran C, Shakeshaft A, Petrie D, Abudeen A, Byrnes J and Navarro H. The benefit-cost of community-action to reduce risky alcohol consumption and harm. *Under review.*
3. Shakeshaft A, Doran C, Petrie D, Breen C, Havard A, Abudeen A, Harwood E, Clifford A, D'Este C, Gilmour S and Sanson-Fisher R. The Alcohol Action in Rural Communities (AARC) Project. Canberra: Foundation for Alcohol Research and Education; 2012.

NDARC THE UNIVERSITY OF NEW SOUTH WALES AER Foundation Ltd The University of Newcastle Australia

ACKNOWLEDGEMENTS

This research project was funded by the Foundation for Alcohol Research and Education (FARE) and was conducted under a Service Agreement between FARE and the Universities of Newcastle and New South Wales. We are very grateful to the Board of FARE for the opportunity to conduct this challenging and ground-breaking research and to the staff of FARE for their continued support and encouragement over the life of the project.

We would like to highlight the outstanding contribution of the AARC communities to this research effort, especially the 10 experimental communities. The project would simply have been impossible without their willingness to engage with the research team, consider the merits of various interventions and implement the agreed strategies. We can only hope that the experience of being involved in rigorous and often difficult research, along with the knowledge we have gained as a result of the AARC project, will be a spring-board towards developing new partnerships with researchers, policy experts and governments, to the betterment of the lives of those who live and work in your communities.

At the substantial risk of omitting individuals who have provided valuable assistance, we are grateful for the expertise and encouragement provided by the Advisory Group and senior collaborators, from whom we sought advice and practical assistance at various stages of the project:

- Professor Richard Mattick, NDARC;
- Professor Ann Roche and Dr Ken Pidd, NCETA;
- Associate Professor Kate Conigrave and Dr Elizabeth Proude, University of Sydney;
- Ms Robyn Considine, CONSAN Consulting;
- Dr Marita Lynagh, University of Newcastle;
- Professor Ian Webster, Emeritus Professor, University of NSW;
- Associate Professor John Wiggers, University of Newcastle;
- Professor Bob Batey, University of Newcastle;
- Dr Billie Bonevski, University of Newcastle;
- Professor Komla Tsey, and Professor Peter d'Abbs, James Cook University, Cairns;
- Associate Professor Tanya Chikritzhs, National Drug Research Institute;
- Mr Paul Dillon, NDARC;

- Ms Tracey Cross and Dr Elizabeth Callister, NSW Department of Education and Training;
- Professor Lawrence W Green, University of California;
- Dr Michael Flynn, NSW Ambulance Service;
- Ms Yvonne Korn, Project Director, Community Drug Action Teams, NSW Health;
- Mr Richard Colbran, Good Sports, Australian Drug Foundation;
- Mr Luc Betbeder-Matibet, web-design consultant;
- Mr Peter Rubinstein, Director, RADD Australia;
- Ms Anne Ratu, Policy Branch, NSW Department of Gaming and Racing;
- Mr Geoff Troth and Dr Claudia Vecchiato, NSW Department of Juvenile Justice;
- Dr Virginia Schmied, NSW Department of Community Services;
- The addiction specialists who provided the GP training: Professors Gilbert Whitton; Kate Conigrave, Greg Whelan, Adam Winstock, Paul Haber, Bob Batey, Tony Gill and John Saunders; and
- Professor Wayne Hall, University of Queensland.

Particular thanks to those who provided data at various intervals during the project, especially:

- Dr Don Weatherburn, Jackie Fitzgerald and Craig Jones, Bureau of Crime Statistics and Research;
- Dr Lee Taylor and Ms Kim Lim, NSW Health;
- Professor Soames Job and Phil Sparkes, NSW Roads and Traffic Authority;
- Medicare Australia; and
- Dr Jim Baldwin, NSW Police.

We are also very grateful to the administrative staff of the University of Newcastle and the University of NSW who provided enormous assistance with the ethical and financial logistics of the AARC project, most notably:

- Ms Ruth Gibbins and Ms Sue O'Connor, Human Research Ethics Committee, University of Newcastle;
- Mr Damien Ryan and Ms Jane Gibson, Finance Department, University of Newcastle; and
- Ms Cris Corpus, Heli Wolk and Tony Gardner, University of NSW;

Last but not least, our most heartfelt thanks to our research colleagues at NDARC who worked tirelessly on the day-to-day implementation and evaluation of the project, providing the energy, enthusiasm and skills to ensure the extraordinarily high quality of the project:

- Dr Joshua Byrnes;
- Ms Bianca Calabria;
- Dr Suzanne Czech;
- Ms Catherine Deans;
- Ms Rox DeLuca;
- Ms Pota Hatzopolous;
- Ms Stephanie Love;
- Dr Hector Navarro;
- Dr Tim Slade; and
- Ms Barbara Toson.

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CHAPTER ONE

CONTEXT, AIMS AND METHOD OF THE AARC PROJECT

KEY FINDINGS

1. Although governments, policy makers, researchers and communities all agree on the potential for more co-ordinated community-level action to reduce alcohol-related harm, there have been few rigorous evaluations of whether the benefits of community-action outweigh its costs.

2. The Foundation for Alcohol Research and Education (FARE) funded the Alcohol Action in Rural Communities (AARC) project. AARC is the first randomised controlled trial of community-action in Australia and only the fifth of its kind internationally.

3. AARC partnered with 10 experimental communities to devise and implement a community-action strategy aimed at reducing alcohol misuse and alcohol-related harm. It used the most stringent evaluation design available (a cluster randomised controlled trial) and the most comprehensive economic analysis (benefit-cost).

4. This chapter summarises the context, aims and method of the AARC project

CONTEXT OF THE AARC PROJECT

Burden of harm imposed by alcohol misuse in Australia

An estimated 4% of the global burden of disease is attributable to alcohol, which is comparable to the death and disability associated with tobacco and hypertension [1, 2]. In Australia, 3.3% of the total disease burden was attributable to alcohol use in 2003, while a protective effect of alcohol was estimated to have prevented 1% [3]. The annual social cost of alcohol in Australia is over $15 billion with lost productivity in the workplace and home costing $3.5 billion and $1.5 billion, respectively, with the cost of alcohol-related road crashes and crime estimated at $2 billion and $1.6 billion, respectively [4]. A recent Australian study that more comprehensively accounted for costs imposed on people other than drinkers themselves, funded by the Foundation for Alcohol Research and Education (FARE), added in excess of $13 billion for out-of-pocket costs and forgone wages and productivity, approximately $0.8 billion for hospital and child protection costs and $6 billion for intangible costs [5].

The Australian approach to reducing the alcohol-related burden of harm

Details of the Australian approach to reducing the alcohol-related burden of harm are provided elsewhere[6]. In broad terms, however, specific intervention strategies have historically been targeted at defined groups or settings considered to have the highest rates of alcohol-related harm, or the greatest potential to prevent the occurrence of alcohol-related harm. General Practitioners (GPs), for example, have been encouraged to provide Screening and Brief Intervention (SBI) to reduce their patients' risk of significant adverse effects from alcohol use. This is because GPs have good access to the whole population (an estimated 88% of the population visit their GP at least once each year, patients regard GPs as a credible source of health information and advice, and such advice is effective (achieving an estimated mean reduction of 3.8 standard drinks per week[7, 8]. Similarly, schools have provided drug and alcohol education to young people, the Australian Government sets alcohol taxation/pricing policy and alcohol advertising is governed by a voluntary code of conduct, monitored by representatives from the alcohol industry, advocacy groups and the general community. There continues to be debate about, and research into, which methods are most cost-effective in implementing interventions in these settings. For example, will GPs be more likely to implement SBI routinely in response to financial incentives or computerised reminder systems [7]? What are the most efficient and acceptable forms of alcohol taxation[9, 10]? Should advertising codes of practice be mandatory rather than voluntary?

Co-ordinated implementation of interventions to reduce alcohol-related harm

Policy experts and researchers have begun to explore the potential of strategically co-ordinating intervention efforts across different settings. Both the Australian Ministerial Council on Drug Strategy and, more recently, the World Health Organization (WHO), have argued that because the burden of alcohol harm is spread across multiple settings, including health services, police and workplaces, all members of a community have a joint responsibility to work together to reduce alcohol-related harm, rather than relying on efforts within the health care sector[11-13]. Indeed, in a media release dated 6 August 2011, the then Australian Minister for Health and Ageing, the Honourable Nicola Roxon, said: "Binge drinking among young people is a community-wide problem that demands a community-wide response ...". Researchers have supported the view that a more systematically co-ordinated combination of these strategies is required to maximise their impact at a community level, even accepting that the effect of more co-ordinated effort within communities will be influenced by the broader legislative framework in which it occurs, such as government policies on taxation, pricing and trading hours. In addition to policy makers and researchers, community-action is highly acceptable to communities themselves: 86% of a sample of 3,017 individuals randomly selected from across the 20 AARC communities agreed or strongly agreed that communities should work together more effectively to reduce alcohol-related harm[14].

A community-action approach that improves co-ordination of activity across settings is also likely to be highly cost-beneficial for a number of reasons. First, it minimises duplication of effort and wasting of resources. Second, the effect of each individual intervention can be synergistically enhanced: an intervention implemented in one setting is more likely to be influential in changing behaviour if it is complemented by related interventions implemented elsewhere. GP-delivered SBI, for example, is more likely to significantly reduce an individual's drinking if a floor price is also legislated by government to ensure alcohol cannot be obtained too cheaply. Third, intervention efforts can be more effectively tailored to the alcohol-harms that are specific to individual communities, which is important given communities have different rates of alcohol-related harm, such as crime, traffic crashes and hospital inpatient admissions[6, 15-17]. Fourth, different communities will have different levels of resources with which to implement alcohol interventions, such as rates of GPs per capita. This, in turn, will influence how services will most effectively be co-ordinated in different communities. Fifth, greater public recognition that alcohol imposes substantial harms across a range of services, settings and individuals can

increase the motivation of all community members to reduce them, a principle that underpins the apparent effectiveness of media advocacy[18].

The contribution of the AARC project

Despite the high level of support for community-action from policy makers, researchers and communities for reducing alcohol-related harm, and the likely benefits of more co-ordinated interventions in communities, the empirical evidence required to support the routine implementation of community-action has been inadequate. This is not to argue that the lack of supportive evidence is the sole, or even necessarily the most important, factor inhibiting the implementation of community-action: clearly there are broader organisational and logistical issues that would also need to be addressed for its successful and widespread implementation. Rather, establishing the extent to which the costs of implementing community-action would be off-set by its benefits is a logical step that would, depending on the outcome, either increase or decrease the strength of the argument for community-action, even if such evidence by itself is insufficient to achieve wide-spread adoption of community-action.

SUMMARY OF THE AIMS AND METHODS OF THE AARC PROJECT

Aims

The AARC project had four primary aims:

1. identify the extent to which alcohol harms differ between otherwise similar communities;
2. estimate the effectiveness of a community-action approach in reducing alcohol-related harm using a cluster RCT as the most stringent evaluation design;
3. conduct a benefit-cost analysis as the most comprehensive economic evaluation; and
4. contribute to the current research effort in the alcohol field and help build capacity for future community-based alcohol intervention research in Australia.

Evaluation design

The AARC project used a prospective RCT evaluation design, with whole communities as the unit of randomisation and analyses. An RCT is widely accepted as the most scientifically rigorous evaluation design available for controlling baseline differences between communities [19]. A benefit-cost analysis also represents the most comprehensive method of economic evaluation that is most appropriate for a community-action intervention, where the benefits and costs will be dispersed across a range of settings and sub-populations within the community [20].

This project is the first undertaken internationally to evaluate a community-action approach using both an RCT evaluation design and a benefit-cost economic analysis.

Selection of communities

As described in detail elsewhere[6], communities in New South Wales (NSW), Australia, were invited to participate if they: had an Urban-Centre Locality (UCL) population between approximately 5,000 and 20,000 (N=27 communities), were at least 100 kilometres away from a major urban centre, defined as a population of at least 100,000 (n=24 communities); and were not known to be currently involved in any other large scale project aimed to assess or reduce alcohol-related harm (n=20 communities). Specifying a substantial minimum distance to an urban centre and ensuring communities were not part of an existing alcohol project maximised the likelihood that any changes in alcohol-related harm were due to the AARC interventions, rather than spill-over effects of activities in a larger urban centre or undertaken as part of another project. A substantial distance to a larger community also minimised the likelihood that the interventions would simply shift alcohol-related harm to a larger centre and provided a reasonably precise and contained definition of a community.

Random allocation of communities

The proportions of males, people aged 15-24 and Aboriginal and Torres Strait Islanders was obtained for each of the 20 communities, using the Australian Bureau of Statistics (ABS) 2001 Census of Population and Housing data [21], because of disproportionately higher levels of alcohol-related harm among males [22], young people [23] and in Indigenous communities [22]. The proportion of males and people aged 15-24 was similar so communities were ranked, in decreasing order, according to the percentage of the population defined as Aboriginal Australians. Contiguous communities were provisionally classified as matched pairs. Each matched pair was checked to ensure that they were at least 100 kilometres apart, to minimise the cross-contamination of intervention effects between experimental and control communities. One community within each pair was then randomly allocated to the experimental group using a customised computer program. The experimental and control communities were comparable on a range of community-level characteristics that either reflected factors known to be associated with higher rates of risky drinking (e.g. youth, remoteness, numbers of licensed venues) or represented a resource that communities could use in interventions to reduce alcohol-related harm (e.g. police, GPs)[6].

Measures

AARC measures comprised a pre- and post-intervention survey of communities, and routinely collected data on: alcohol-related crime; traffic crashes; and inpatient hospitalisations[6]. Survey data were designed to identify harms that are substantial, although not severe enough to be reported to police or to require hospitalisation. Routinely collected data were used because they provided a potential retrospective baseline of alcohol harms over a number of years. The latter measures have been used relatively infrequently to evaluate intervention effects: of the 26 alcohol community-action trials published since 1980, only four used crime or police statistics as an outcome, four used traffic crash data and only one used hospital admissions [24]. Given that these routinely collected data have rarely been used to evaluate alcohol community-action interventions, AARC conducted analyses to identify the most appropriate methods for comparing communities at baseline and for evaluating any intervention effects [17, 25-27].

INTERVENTION OVERVIEW

Overview of community-action

Community-action can be defined as an approach in which a range of intervention strategies are systematically coordinated and simultaneously implemented across a whole community [28]. The simultaneous and sustained implementation of a number of complementary interventions aims to maximise their combined impact, even if the individual interventions may be of variable effectiveness. The approach also demonstrates principles of equity and access, since community-wide interventions are complemented by those targeted specifically at defined at-risk sub-groups. The effectiveness of the community-action approach can also be enhanced by collaboration with existing community support networks, such as Community Drug Action Teams, youth workers and liquor accords. This collaboration engenders greater community participation and ownership, since it allows for more effective incorporation of knowledge, expertise and community resources.

Selection of the AARC intervention strategies

Thirteen interventions, summarised in Table 1 and described in detail elsewhere[6, 29], were selected by identifying existing research evidence, obtaining the views of communities and alcohol professionals about the types of interventions they thought were important, and then negotiating with a key stakeholder group in each community to specifically define and implement each intervention. The next chapter provides a detailed description of each intervention strategy and its cost.

Table 1.1: Summary of the interventions and the timeline of their implementation, and the timing of the community surveys

Intervention	Intervention period						
	Pre	Initiation	Post				
	2001-2004	2005	2006	2007	2008	2009	2010
1. Engagement[a]	x[*]	x					
Pre-intervention community survey		x					
2. GP SBI[b] training[c]	x[**]	x					
3. Feedback to key stakeholders		x	x	x	x	x	
4. Media advocacy		x	x	x	x	x	
5. Workplace policies/practices training[a,d]		x					
6. School-based intervention[d]		x	x				
7. GP feedback on prescribing[a]			x				
8. Pharmacy-based SBI[b]			x	x			
9. Web-based SBI[b]			x	x			
10. Aboriginal Community Controlled Health Services support for SBI[b]				x	x	x	
11. Good Sports program[c]				x	x	x	
12. Targeting high-risk weekends				x	x	x	
13. Hospital ED SBI[b]						x	
Post-intervention community survey							x

[a]*The grey highlighted cells indicate those interventions where some ongoing effect was expected over the post-intervention period (2006-2009).*
[b]*Screening and Brief Intervention (SBI)*
[c]*The timing of these interventions was dictated by opportunities to expand existing programs to include the AARC communities.*
[d]*The timing of these interventions was dictated by having access to the expertise needed to develop and implement the interventions relatively quickly.*
[*]*Commenced March 2004.*
[**]*Commenced October 2004.*

CHAPTER TWO

DETAILED DESCRIPTION OF INTERVENTIONS AND THEIR COSTS

KEY FINDINGS

1. Effective policy and successful interventions will balance research evidence, community views and professional expertise: all of these are important. The AARC project:
   - Conducted 5 systematic reviews which showed current evidence from rigorous scientific trials is weak; and
   - Identified high disagreement on appropriate action between communities' and professionals' views.

2. The agreed suite of interventions comprised 13 strategies:
   - An engagement process;
   - Feed back of data to key stakeholders;
   - Media advocacy;
   - Screening and Brief Intervention (SBI) for GPs;
   - Improving GP prescribing practices;
   - Workplace policies and programs;
   - High school intervention;
   - Pharmacy-based SBI;
   - Aboriginal Community Controlled Health Services SBI;
   - Targeting high risk weekends;
   - Good Sports;
   - Hospital Accident and Emergency Department SBI; and
   - Internet-based SBI.

3. The total cost of implementing these 13 interventions was $608,102 ($61,000 per community), ranging from a high of $195,393 for media advocacy to a low of $2,959 for pharmacy-based screening and brief intervention.

INTRODUCTION

In response to alcohol-related harm[1-3], interventions have historically targeted individual-level risk factors associated with high rates of consumption and harm, such as age, gender, ethnicity and socio-economic status[4,5]. More recent interest has focussed on identifying community characteristics that encourage risky alcohol consumption and subsequent harm, for which community-level interventions are appropriate[6]. To date, however, only nine types of interventions have been examined in community alcohol trials[7], with some limited evidence for the effectiveness of media advocacy[8-13], enforced point-of-sale legislation[10,11,14,15] and increased police visibility[13,16]. The four Randomised Controlled Trials (RCTs) of community-based alcohol interventions, which represent the most methodologically rigorous evidence, have shown small decreases in only two outcomes: adolescent alcohol use[10,17,18]; and a reduction in availability of alcohol to youth[19]. Although there are pragmatic restrictions on the types of interventions which can typically be implemented within the time, resource and legislative constraints of a prospective research trial (e.g. changing alcohol taxation rates is highly unlikely to be possible), there is clear capacity to test the effectiveness of a wider range of community-based interventions.

An evidence-based approach to identify the ideal combination of new or existing interventions to evaluate in community-based trials ought to comprise a combination of research evidence and community and professionals' views[20]. The primary advantage of research evidence is that it is the least susceptible to bias, however, it can often be difficult to generalise the evidence to all settings. An intervention's effectiveness may depend upon community characteristics, the existing interventions already in place plus the skills and opinions of those tasked with implementing the interventions. Complementing research evidence with community and professionals' views is likely to improve the acceptability and implementation of interventions, particularly when research evidence is limited or absent and where the community and professionals are involved in their delivery. Given the process of combining research evidence with the views of consumers and professionals has been inadequate[21], more effective alignment between these three components may improve the acceptability, uptake and cost-effectiveness of community-based alcohol interventions[22,23]. One likely barrier to routine integration of consumers' and professionals' views with current research evidence is the lack of practical examples of how this can be done successfully within the context of community-based alcohol trials.

AIMS

This appendix aims to identify the intervention preferences of communities and alcohol professionals, as well as the factors that influence their choices, and to compare those with research evidence to identify a number of community-based interventions that could be empirically evaluated.

METHOD

Samples

Communities

As described in Chapter 1, the 20 AARC communities were selected because they had a population size between 5,000 and 20,000, were at least 100 kilometres away from a major urban centre (population ≥ 100,000) and were not currently involved in another public health project for alcohol harm.

Alcohol professionals

Professionals were selected from the approximately 350 members of the Australasian Professional Society on Alcohol and Other Drugs (APSAD). APSAD comprises drug and alcohol counsellors, clinicians, policy professionals and researchers with a professional interest in the drug and alcohol field. In order to maintain confidentiality and independence from the researchers, the APSAD Secretariat agreed to mail the questionnaire, together with a pre-paid return envelope, to 200 randomly selected APSAD members who had listed alcohol as an area of interest. To optimise the response rate, APSAD re-sent the survey to the same 200 members after two weeks. De-identified responses were returned to the authors.

Measures

Community survey

As described in Chapter 2, the pre-intervention survey comprised five sections: 1) alcohol use; 2) alcohol harms; 3) community action; 4) general health; and 5) demographic information. As part of Section 4, respondents were asked to allocate across eight possible interventions a budget of $1000 (judged to be a reasonable household contribution over a lifespan and because it can be easily divided). This budget allocation exercise identifies both the most commonly selected interventions and the extent of support for them. The specific question was: *"Think about all problems related to alcohol in your community. These may include relationship difficulties, health issues, car accidents*

and crime. The next 3 questions ask you to consider what you would be prepared to do to reduce these problems. Your community is given $1000 to spend on programs to reduce alcohol problems. It is your job to allocate this money. You can spend it all on one program (100%) or a combination of programs. Please enter answers in percentages and make sure it adds up to 100%." Intervention options were: promotion of safer drinking through media and licensed venues (promote safer drinking), policies to reduce work-related drinking (workplace), information on alcohol harms provided by pharmacists/chemists (chemists), community-wide strategies to help local communities work together more effectively (community), advice from general practitioners (GPs), school-based information (school), legal strategies, such as random breath testing and enforcing licensing laws (police); and advice from hospital staff (hospital). These broad intervention areas were chosen because it was considered unlikely that the majority of the public would have knowledge about specific strategies. The order in which the first and last four interventions were presented was swapped in two different versions of the survey, to measure order response bias.

Professional survey

A budget allocation exercise asked professionals to allocate a fixed budget to those interventions they thought would be most cost-effective in reducing alcohol harm over three years (the maximum amount of time likely to be available to implement interventions in the AARC project), in the hypothetical rural community summarised in Table 2.1. The characteristics of the hypothetical community (modelled on data from two rural communities in NSW with a population of approximately 12,000) were specified to standardise the definition of a rural community, since intervention preferences may change depending on community characteristics.

Table 2.1: Descriptive statistics of the hypothetical rural community

Demographics		Medical and other services	
Population	12,000	No. of general practitioners (full-time)	14
Females: Males	1:1	No of GP practices	3
Proportion young persons (15-24yrs)	13%	No. of drug and alcohol workers (full-time)	1
Proportion Indigenous Australians	5%	No. of hospitals (with 24hr Emergency Department)	1
Distance to nearest large centre (more than 20,000 population)	170km	No. of community pharmacies	2
Distance to nearest urban centre (more than 100,000 population)	400km	Total no. of full time police & (no. of full time police on Highway Patrol)	14 (3)
Average annual wage/salary (Before tax)	$30,000	No. of high schools	3
Unemployment rate	8%	No. of licensed premises	10

Crime and Health Statistics	Community average	State average
Assaults per 100,000 population	1100	1050
Sexual assaults per 100,000 population	90	60
Driving under the influence of alcohol or other drugs per 100,000 population	27	15.5
Proportion of population who attended an emergency department in last 12 months	20%	13.5%
Proportion of population who have had a heavy drinking day in the last 12 months	40%	35%

Professionals were asked to allocate $100,000 to any combination of 23 interventions (Table 2.2). Interventions were identified and categorised in a three step process. First, a list of potentially effective interventions was compiled from the existing literature relevant to community-based alcohol trials[6-19,36-44], excluding those not practically feasible for a researcher-driven RCT (eg. despite evidence for the likely cost-effectiveness of increased alcohol tax in Australia[45], it was excluded because it cannot reasonably be implemented in selected communities only and is beyond the control of researchers to legislate, implement and enforce). Second, this list of interventions was reviewed for its comprehensiveness and modified by five alcohol professionals. Third, similar interventions were grouped into categories to reduce the total number of interventions to a practical number (eg. different school-based strategies were grouped together as "school-based programs"). The category headings were designed to be comparable to the intervention options in the community survey.

In addition to the budget allocation exercise, professionals were asked about: i) personal characteristics (age, sex, how long they had worked in the field, the type of organization for which they currently work, their current state of residence and if they had ever worked or lived in a rural community); ii) knowledge of an intervention (respondents rated their knowledge from 1 [no knowledge] to 5 [extensive knowledge] and the average rating of professionals who chose each intervention was compared to those who did not choose that intervention); iii) the allocation task (respondents strongly agreed, agreed, neither agreed nor disagreed, disagreed, or strongly disagreed with the following statements: the allocation task was realistic; the task was difficult; their allocation would reduce alcohol related harm; and whether they would change their allocation if the hypothetical community had different characteristics); and iv) their preferred outcome (improving health or reducing social harms).

Table 2.2: List of 23 selected interventions

Schools
School-based programs
Media education and safer drinking environments
Regional television
Local Newspaper
Regional radio
Development of voluntary or mandatory codes of practice for hotels (eg. use of high impact plastic glasses, limiting the number of patrons present at any one time, making food and water available for free, free soft-drinks for designated drivers, banning promotions that encourage binge drinking, such as happy hours)
Voluntary or mandatory codes of practice for hotels/bars (eg. staggering closing times for different hotels, refusing entry after a set time, limiting take-aways)
Expanded training programs for hotel staff (eg. responsible service of alcohol, how to avoid serving alcohol to intoxicated persons)
Community
Family-based interventions
Greater integration between programs aimed at reducing alcohol harm and broader community programs, such as employment and education programs
Greater targeting of high risk groups (eg. Aboriginals and Torres Strait Islanders, youth, high risk families and geographical areas)
Expansion of social work/community health roles to more effectively co-ordinate a range of services (eg. employment services, family support, financial advice, school counsellors) and improve their level of tailoring to the particular circumstances of individuals and families
Provision of self-help material and advice in the mail
Community drug and alcohol counsellors
Contributing resources to broader community development programs involving arts/culture and sporting/recreational events
Police/legal
Promoting greater enforcement of existing liquor licensing laws by police (eg. underage drinking; not serving intoxicated patrons)
More effective random breath testing
More effective sentencing options for magistrates (eg. ignition locks and incarceration diversion programs)
GPs
General practitioners
Hospital/Emergency departments
Emergency Department (ED) staff
Hospital staff (other than EDs)
Supporting/establishing D&A clinics and residential rehabilitation
Ambulance officers
Pharmacists
Community pharmacists

Statistical analyses

Data adjustment

For both the community and professional allocations, where the total budget allocation to interventions was erroneously reported as greater than 95% but less than 105%, the allocations to each selected intervention were proportionately re-scaled to ensure the total equalled 100%. Where errors were outside this range, these responses were excluded from the analysis. Interventions selected by less than 25% of professionals were excluded from further analysis, as it was deemed unlikely that they would be included in a combined optimal set derived from the aggregate of the professionals' choices. Interpretation is restricted to only highly significant results, the level of statistical significance is set at $p<0.01$ for the community sample, due to its large sample size, and $p<0.05$ for the professionals' sample.

Selection of interventions

For both data sets, the percentage of respondents who selected an intervention and the average amount spent on the intervention is reported, except for workplace intervention which was not defined explicitly enough in the professionals' survey to be reasonably comparable to the community survey. Correlations between selected interventions were also examined to identify those that are complementary (more effective when implemented together) and substitutes (less effective when implemented together).

Intervention preferences

Tobit regression models were estimated to assess the individual and professional characteristics which explained differences in intervention preferences. Tobit models are appropriate in this instance because the budget allocation is constrained by a minimum of $0 (not selecting the intervention) and a maximum of either $1000 (community survey) or $100,000 (professionals' survey). The outcome variable in all models is the average level of preference for an intervention (both the frequency with which it is selected and the budget amount allocated).

The community preferences the model was estimated with explanatory variables on three levels: a variable to control for the change in order of questions (order), community-level factors (the extent of heterogeneity between communities (19 dummy variables)) and individual-level factors (age, sex, education level, number in the household aged at least 14 years, frequency and quantity of alcohol consumption, having a family member/friend they perceive drinks too much and income variables

[weekly household income (mid-point of selected income band) and dummy variables for income more than $78,000/year, don't know and prefer not to state income]).

For the professionals' survey data, the Tobit model was estimated with explanatory variables for whether the professional has lived or worked in a rural community, the number of years worked in the alcohol field and whether the professional works for a government or other organisation.

Communities' versus professionals' views

Community and professionals' views are compared to ascertain their level of disagreement. Since the professionals' survey contained a larger and more specific list of interventions than the community survey, these were re-grouped for this comparison into seven comparable categories (Table Five): school-based programs, media (any funds allocated to newspaper, radio or television advertising), community (interventions aimed at better integration of current programs, resources for community development and expansion of community health/social work roles), police (more effective random breath testing, greater enforcement of liquor licensing laws and increased magistrate options), GP training and interventions, hospital or Emergency Department (ED) based interventions, and chemists.

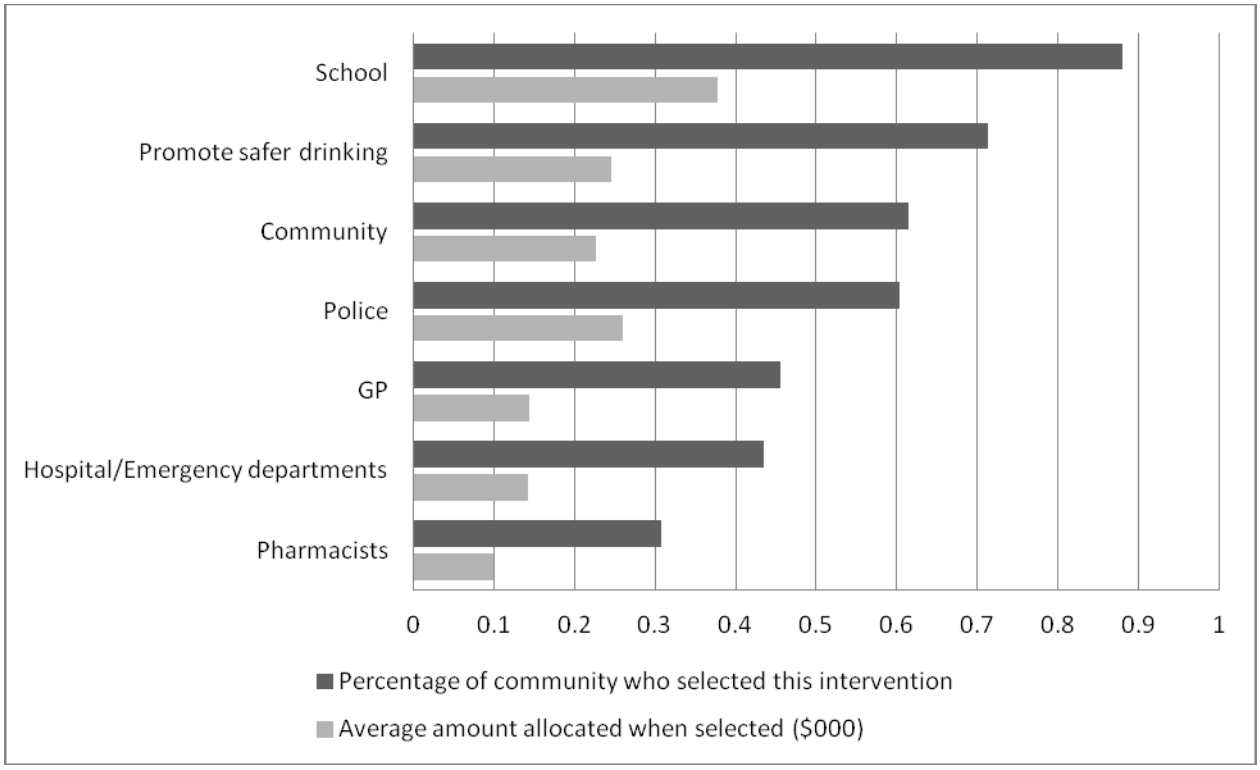
RESULTS

Community survey

Community views

The survey response rate and the characteristics of respondents are detailed in Chapter 2. Of the 3,017 responses received, 148 did not answer the resource allocation question and 72 allocations did not add up to 100%, of which 14 met the criterion for rescaling adjustment. For the 2,811 eligible responses, the percentage who selected an intervention and the average percentage of the budget allocated is shown in Figure 2.1.

Figure 2.1: Community views regarding which community-wide interventions are most likely to be cost-beneficial in reducing alcohol-related harm.



School programs were selected most often (88.0%) and given the largest percentage of total funds when selected (37.8%), followed by media messages (71.3% selected, 24.5% of funds) and community programs (61.4% selected, 22.7% of funds). Police enforcement was the only other intervention selected by more than half the respondents (60.4%) and it was allocated more funds (26.0%) than both media messages and community programs.

Tobit regression community results: order effects and intervention preferences

The results showed that reversing the order of presentation of the interventions did not significantly change the frequency with which the top four interventions were selected (schools, media, community, police), although police enforcement was selected slightly more frequently than community-wide interventions. As summarised in Table 2.3, Model 2 shows intervention preferences are influenced by individual characteristics.

Table 2.3: Characteristics of community respondents that predict their alcohol-intervention preferences

	Intervention type Coefficient (robust standard error)						
	School	**Safer drinking**	**Community**	**Police**	**GP**	**Hospital/ED**	**Pharmacists**
Constant	**25.5* (5.21)**	1.45 (4.65)	7.98 (5.20)	**18.7* (5.83)**	7.58 (3.61)	**12.7* (3.75)**	6.80 (3.35)
Frequent drinkers	0.02 (0.07)	0.12 (0.06)	-0.12 (0.07)	**-0.25* (0.07)**	-0.01 (0.05)	**0.16* (0.05)**	-0.03 (0.04)
Family/friend drinks too much	-0.34 (0.76)	-0.16 (0.68)	**2.28* (0.76)**	-1.02 (0.86)	-0.13 (0.53)	-0.48 (0.56)	0.26 (0.50)
Female	2.43 (1.22)	-2.27 (1.08)	2.17 (1.22)	1.15 (0.86)	-0.17 (0.85)	**2.32* (0.89)**	0.12 (0.80)
Age	**0.14* (0.05)**	-0.01 (0.05)	-0.10 (0.05)	-0.07 (0.06)	-0.09 (0.04)	**-0.21* (0.04)**	**-0.19* (0.03)**
Education level	-0.52 (0.24)	**0.86* (0.21)**	0.14 (0.24)	-0.15 (0.27)	-0.29 (0.17)	-0.28 (0.17)	-0.30 (0.16)
Household gross yearly income > $78,000 pa	**6.90* (2.28)**	1.02 (2.03)	-2.08 (2.29)	-2.74 (2.56)	-3.48 (1.58)	-3.12 (1.67)	**-4.03* (1.50)**
Prefer not to say income	3.45 (2.47)	0.30 (2.20)	-1.09 (2.47)	-0.76 (2.76)	**-5.11* (1.72)**	-1.77 (1.79)	-1.72 (1.60)
Community[a]	10.5	8.68	11.0	15.1*	6.33	**11.2***	8.32

**significant where p<0.01*

[a]*Community is the maximum difference in average allocation preference between all twenty communities – significance is based on a joint test for significance of all community dummy variables.*

Hospital-based strategies is the intervention type most susceptible to preferences, being more strongly supported by frequent drinkers, females and some whole communities, and less strongly supported by older people. School-based programs were more strongly supported by older people and those with a household gross income greater than $78,000 per year. Media advocacy was supported by those with higher levels of education, while community-wide activities were supported by those who have a family member or friend whom they perceives drinks too much. GP-based interventions were supported by those who preferred not to provide their income level. Chemist and police activity were the only two interventions to have less support: chemists were less strongly supported by older people and those with a household gross income greater than $78,000 per year, while police activity was less strongly supported by more frequent drinkers.

Professionals' survey

Response rate and sample characteristics

Of the 200 questionnaires mailed to APSAD members, 43 responses were received. Of these, two respondents returned a blank questionnaire and indicated that since they no longer worked in the field they did not feel qualified to give meaningful responses. Five questionnaires were also returned as wrong addresses, giving a response rate of 21.3% (n=41). The average number of years respondents had worked in the drug and alcohol field was 14.6. The majority (44%) worked for a government organization, 20% worked for a treatment organization, 17% worked for a university or research organization, 10% worked for a non-government organization, while 10% worked jointly for more than one of these. Sixty-one percent indicated that they had lived or worked in a rural town.

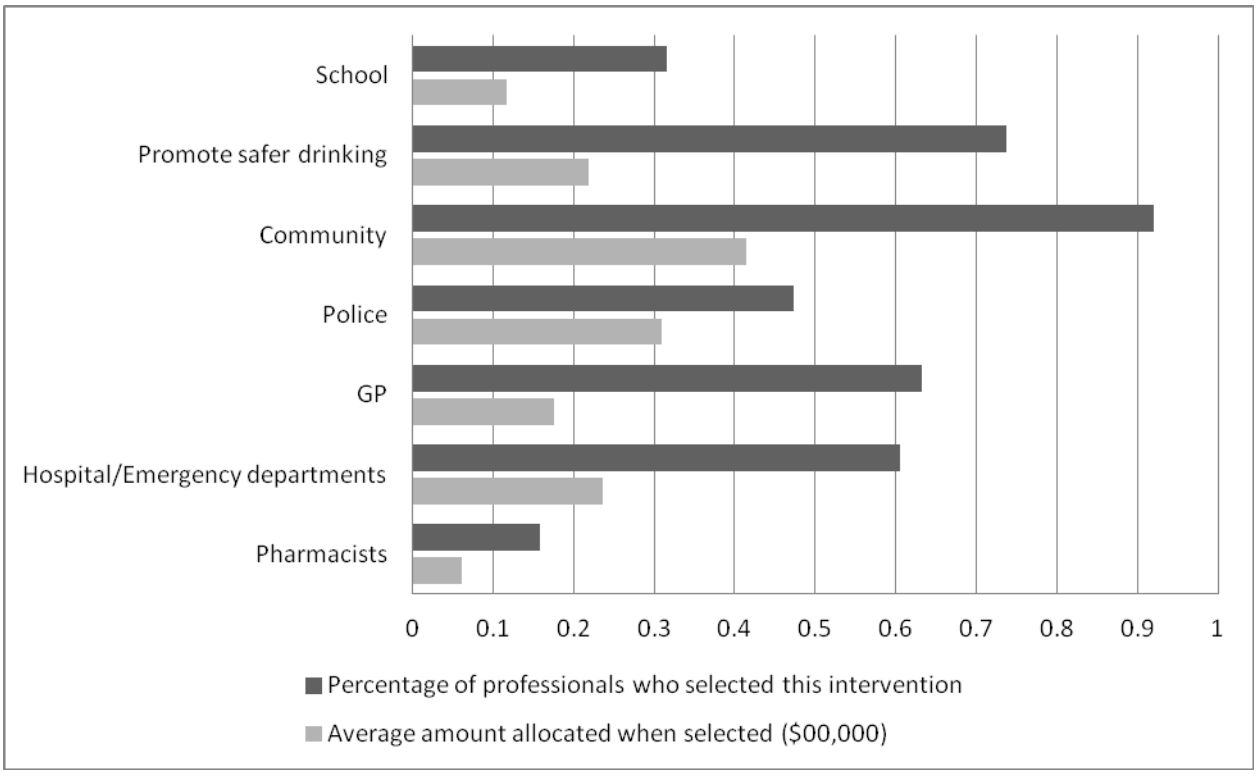
Intervention and resource allocations

As summarised in Table 2.4, all 23 interventions were allocated at least some funds by at least one professional. For ease of comparison, these preferences are presented in the same format as for the community views in Figure 2.2.

Table 2.4: Professionals' views regarding which community-wide interventions are most likely to be cost-beneficial in reducing alcohol-related harm.

List of Interventions (in order of most often implemented)	Proportion of professionals which selected	Average amount allocated when selected ($'000)
Training General Practitioners	61.0%	17.9
Targeting High Risk Groups	53.7%	15.4
Harm Reduction Code of Practice	46.3%	9.3
Training Emergency Department staff	43.9%	14.4
Expansion Social Work Services	43.9%	21.1
Resources for Com. Development	41.5%	25.9
Enforcement of Liquor licensing laws	39.0%	19.9
School Programs	36.6%	10.9
Random Breath Testing	34.1%	17.4
Integration Between Programs	34.1%	16.8
Training Drug Alcohol Counsellors	31.7%	14.0
Training for Hotel Staff	31.7%	8.0
Regional Radio	29.3%	6.7
Supply Reduction Code of Practice	29.3%	8.4
Regional Television	26.8%	11.9
Local Newspaper	26.8%	7.9
Family Programs	26.8%	9.1
Training General Hospital Staff	24.4%	7.7
Support D&A clinics and Res. Rehab	17.1%	16.5
Training Community Pharmacists	14.6%	6.0
Training Ambulance Officers	12.2%	6.3
Magistrate Options	12.2%	7.7
Sending Self-help Material in the Mail	4.9%	5.0

Figure 2.2: Drug and Alcohol Professionals' views regarding which community-wide interventions are most likely to be cost-beneficial in reducing alcohol-related harm



The five interventions selected most commonly were training of GP's (61.0%), targeting high risk group (53.7%), a harm reduction code of practice (46.3%), expanding social work services (43.9%) and the training of hospital Emergency Department (ED) staff (43.9%). The five interventions selected least commonly were sending self-help material through the mail (4.9%), training ambulance officers (12.2%), increasing magistrate sentencing options (12.2%), training community pharmacists (14.6%) and supporting drug and alcohol clinics and residential rehabilitation (17.1%).

Table 2.4 also outlines the average amount spent on each intervention when selected. The five interventions that received the largest budget allocation when selected were resources for community development ($25,900), expanding social work services ($21,100), enforcement of liquor licensing laws

($19,900), training of GP's ($17,900) and random breath testing ($17,400). In combining the frequency of intervention selection and the average amount allocated when selected, there are four possible extreme cases: often selected and large funding when selected, such as resources for community development (41% selected; $26,000 allocated); often selected and little funding when selected, such as a harm reduction code of practice (46% selected; $9,000 allocated); seldom selected and large funding when selected, such as supporting drug and alcohol clinics and residential rehabilitation (17% selected, $16,500 allocated); seldom selected and little funding when selected, such as sending self help material in the mail (5% selected, $5000 allocated).

For five interventions, more than half the allocated funds on average were spent in the first year. These included a harm reduction code of practice for hotels/bars, training emergency department staff, training drug and alcohol counsellors, training hotel/bar staff and supply reduction code of practice. For all other interventions, funds were spread more evenly over the three years. The largest positive Pearson correlation coefficient for selected interventions was (0.58) between random breath tests and liquor licensing enforcement (p-value 0.0001). The largest negative correlation (-0.25) was between resources for community development and training hotel/bar staff (p-value 0.1086).

Perceptions of agreement

Sixty-six percent of professionals agreed or strongly agreed that the budget allocation was a realistic task facing those trying to reduce alcohol related harm, and the same proportion agreed or strongly agreed that this task was difficult. 58.5% of professionals either agreed or strongly agreed that they were confident that their allocation would reduce alcohol related harm.

Influences on professionals' views

Twelve percent of professionals agreed or strongly agreed that a change in the population from 12,000 to 20,000 would have changed their allocation and under a third (29%) of professionals either agreed or strongly agreed that they would have changed their allocation if the community was urban rather than rural. However, when the indigenous proportion of the population changed from 5% to 10%, 41% of professionals' agreed or strongly agreed that this would change their allocation.

Tobit regression results: intervention preferences

The professionals' allocations were compared across three demographic variables: the number of years of experience they had in the D&A field, whether they worked for a government organization or whether they had lived or worked in a rural community. There were no statistically significant relationships between professionals' characteristics and their intervention preferences, although there was a clear trend for professionals with more years of experience to allocate fewer resources to school-based interventions (p-value=0.056).

Knowledge of interventions and the optimal set of interventions

In general, professionals who selected an intervention perceived that they had greater knowledge about the effectiveness of the intervention than those professionals who did not select the intervention. The largest difference occurred for the enforcement of liquor licensing laws, where those who selected this intervention reported an average rating for knowledge/experience of effectiveness equal to 4.21 out of 5, compared to an average rating of 2.95 for those professionals who did not select it. However, for those professionals who selected school based interventions, educational messages in the local newspaper and education messages on community radio, their stated knowledge about the effectiveness of these interventions (3.3, 3.0 and 3.2 out of 5, respectively) goes against the general trend and is slightly less than professionals who did not select these interventions (3.5, 3.3 and 3.6 respectively). On average, professionals indicated they would focus 56% of interventions on reducing social harms and the rest on reducing health harms, suggesting no relationship between professionals' preferred focus of intervention effect and the interventions they select.

The set of interventions selected by each professional is categorized as their "optimal set", that is, the combination of interventions each respondent considers will optimally reduce alcohol related harm in this community. The mean number of interventions selected by each professional was 7.2 (of a possible 23 interventions), with a median of 7. Responses containing small adding errors in budget allocations' were proportionally adjusted, according to their current allocation, to make their total spent equal to the full budget.

DESCRIPTION AND COSTS OF INTERVENTIONS SELECTED FOR AARC

1. Engagement process

Background

The first intervention that was implemented was to systematically engage with the AARC communities. The overall purpose of the initial engagement process was to introduce the AARC project, provide some data on alcohol-related harm in rural NSW, particularly in relation to differences between rural and urban communities, to obtain their agreement to participate in the project and to agree to the next immediate steps in implementing the AARC project.

Timeline of intervention implementation

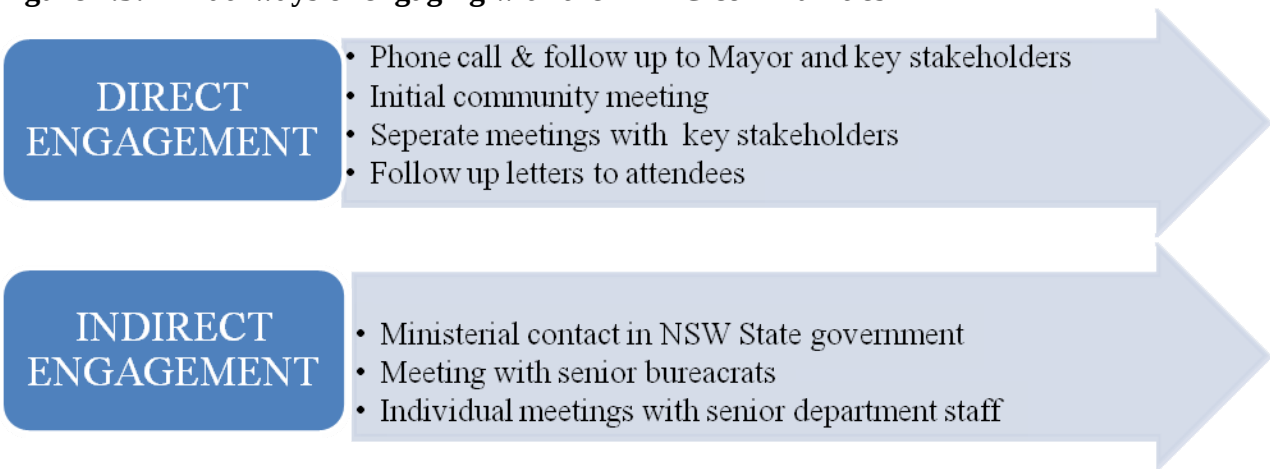
The engagement process for all AARC communities occurred in the period March to June 2004.

Description of intervention components and implementation process

There were two broad, simultaneously implemented, processes for engaging with communities, as illustrated in Figure 2.3:

1. Direct engagement with the communities themselves (ground-up approach). This approach is obviously critical to obtain support from the key stakeholders and community members in the communities themselves; and
2. Indirect engagement via state or regional-level offices (top-down). This approach was considered important given the high likelihood that key stakeholders in the communities would need either the explicit or implicit consent of their managers, or organisations, to be involved in the project.

Figure 2.3: Pathways of engaging with the AARC communities



Direct engagement with communities

Organising the engagement phase of the AARC project involved a number of specific steps, summarised as follows.

Phone call to the Mayor in each of the 10 AARC communities

Either Associate Professor Anthony Shakeshaft or Professor Rob Sanson-Fisher, as co-leaders of the AARC project, rang the Mayor in each of the 10 AARC communities to discuss the project and seek agreement that:

- The local government would auspice the AARC project. The primary reason for this was to avoid the perception that reducing alcohol-related harm was the primary responsibility of any one group, such as the police, or schools or health care professionals. Rather, the stated aim of AARC was that optimal outcomes would be achieved if a range of groups in the community contributed to reducing alcohol-related harm.
- The Mayor, or his/her representative, would Chair an initial community meeting, to which key stakeholders would be invited to attend by the research team (to avoid the administrative responsibility for this falling on local government staff).
- Obtain the name and contact details of an appropriate Mayor's representative to work with the AARC research team to facilitate the organisation of a community meeting (choosing an appropriate date and time; reviewing the proposed invitation list; booking an appropriate venue with necessary AV requirements; organise refreshments for the meeting).

Follow-up letter to the Mayor

Following the phone call, the AARC research team liaised with the nominated community representative to organise the meeting. Once these details were in place, the AARC team wrote a letter to the Mayor thanking him/her for their assistance to date in organising the initial meeting, advising the agreed date and time, confirming that he/she would Chair the meeting, attaching examples of invitations to be sent to other key stakeholders and inviting any suggestions or comments and advising that the invitations would be sent out in the following week.

Letters of invitation to key stakeholders

The following key stakeholders were mailed specific invitations asking them, or their nominated representative, to attend the meeting:

- Local Government representatives (Community Development Officer, Youth Worker, Aboriginal Liaison Officer);
- General Practitioners;
- The CEO of the relevant Division of General Practice;
- Community Health representatives (the Manager and the Drug and Alcohol Counsellor);
- Senior local hospital representatives (Chief Executive Officer and Information Manager);
- CEO and Population Health Director of the relevant Area Health Service;
- Local manager of the NSW Ambulance Service;
- Local pharmacists;
- The most senior local police officer in the NSW Police Force;
- The Intelligence Officer located in relevant Local Area Command of the NSW Police Force;
- Local Area Commander in the NSW Police Force;
- Local Probation and Parole Officers;
- Local Magistrates;
- Local Road Safety Officers, NSW Roads Traffic Authority;
- The local high school principals;
- The relevant Directors of Education in the region (the State School system, the Association of Independent Schools and the catholic Education Office);
- The local Community Drug Action Team (a division of the NSW Premier's Department, which was later moved to NSW Health);
- The relevant Project Managers from the Community Drug Action Strategy of the NSW Premier's Department;
- The Project Director of the Community Drug Action Strategy of the NSW Premier's Department;
- The alcohol licensees;
- The CEO of the major employers in the area;
- Local media representatives (only local radio and newspapers: regional TV and radio were omitted to minimise the opportunity for contamination of control communities); and
- Senior representatives of the local Aboriginal communities.

The letter comprised the following information:

- A brief paragraph on rates of alcohol-related harm in Australia, noting that this harm is disproportionately high in rural communities;
- Advice that a research team had been funded to trial a project aimed at reducing alcohol-related harm by simultaneously implementing a range of interventions in rural communities in NSW, that their community had been randomly selected to participate and that such an undertaking is a challenge requiring support and input from a range of individuals and organisations;
- An indication that their professional position places them in a key role in contributing to reducing alcohol-related harm in their community and inviting them to attend the community meeting at the scheduled day and time;
- An invitation to attend a second, separate meeting on the same day, just with their colleagues (eg. all GPs in the community) to discuss their specific level of interest in being involved, and in what capacity; and
- An assurance that the same invitation had been sent to their colleagues in the community (eg. the other GPs), as well as to their regional or state representative (eg. the CEO of the relevant Division of General Practice and the CEO of the relevant Area Health Service).

Initial community meetings and separate meetings with key stakeholders

An initial community meeting was held in each of the 10 AARC intervention communities, between 17th March 2004 and 2nd June 2004. These meetings required the following resources:

- An agenda;
- A handout for the meeting, that summarised alcohol use and harm in Australia and rural regions, identified what the aims of AARC and the researchers, indicated why and how each community was selected to participate in AARC, emphasised the community-wide approach and identified suggested next steps and contact details of the researchers;
- A power-point presentation, that presented summary information on: the AARC project, alcohol use and harm in Australia generally and rural areas specifically, NHMRC drinking guidelines, examples of the importance of involving a range of key stakeholders (eg. GPs, health services, police, licensed premises, workplaces, schools and media) and the suggested next steps (agreement for the community to be involved, establishing a community liaison person, promoting a community

survey, attend a subsequent meeting to obtain feedback of survey and other data results, and help design and implement interventions);

- A media release, that was released in the week prior to the community meeting, essentially to advise the general community that they meeting was occurring and inviting them to attend; and
- Organising and meeting separately with key groups, such as the local government, GPs and police, to discuss their specific level of interest in being involved and how they might best be engaged in the process.

Follow-up letters

Following the initial community meetings and separate meetings with key stakeholders, a series of letters were sent to thank community members for their interest in the project, advise that the community had agreed to participate, confirm who the community liaison person would be and identify that the next steps would be: GP training; a workshop on alcohol harm with high school students; and to design and implement the community survey. Separate letters were sent to those who attended, those who were invited but did not attend, the Mayor or person who Chaired the meeting and the person nominated as the community liaison person.

Indirect engagement with communities

To complement direct engagement with communities, a number of specific steps were taken to engage with the state- or regional-level offices of key stakeholders in the communities, as follows.

Ministerial contact in the NSW State Government

The project leaders wrote to, and met with, the NSW Special Minister of State, the Hon. John Della Bosca. The outcomes of this meeting were that the Minister agreed to write to the Directors of the relevant departments requesting that the support the project generally, and attend a meeting between with the researchers, auspiced by the NSW Cabinet Office.

Meeting with senior bureaucrats, auspiced by the NSW Government Cabinet Office

This meeting occurred on 24th May 2004. It required the development of an agenda and a power-point presentation that covered the following topics: overview, research team, purpose of the meeting, aims of the study, research design, identify relevant communities, outcomes, community consultations, possible

intervention strategies and summary. The relevant senior manager, or his/her nominated representative, of the following departments attended:

- Department of Education and Training;
- Ministry for Police;
- NSW Police;
- Roads and Traffic Authority;
- Premier's Department;
- Attorney general's Department (BOCSAR);
- Department of Housing;
- Department of Aboriginal Affairs;
- Department of Juvenile Justice;
- Department of Sport and Recreation;
- Department of Community Services;
- Department of Local Government;
- NSW Health (Population Health Strategy Branch & Centre for Drug and Alcohol);
- Office of Rural Affairs;
- Department of Gaming and Racing;
- Department of Corrective Services; and
- Department for Women.

The primary outcomes from this meeting were general agreement to encourage their staff to participate and that the researchers would meet individually with different Departments and Offices to discuss their specific concerns, potential involvement and accessibility to data.

Individual meetings between senior department staff and researchers

These meetings all occurred in 2004. In addition to obtaining formal agreement to ask their staff in the communities, or relevant regional areas, to support the AARC project, these meetings also shaped some of the interventions. For example, at the meeting with the NSW Department of Education and Training (DET), senior DET staff said they would be happy to support a school-based intervention if the communities wanted that, provided the intervention protocol was clear, that they could approve the content prior to its implementation, and that they did the evaluation of this specific component of the program themselves. This was agreed by researchers.

Costs

Table 2.5 provides an overview of the engagement process intervention costs. Total intervention costs are estimated at $55,517 with direct engagement costs accounting for 87% of total costs and indirect engagement costs 13%. The key cost drivers include planning and running the initial community meeting (47% of total costs) and planning and running the initial stakeholder meeting (37% of total costs). As noted in the table, costs of developing and conducting the media release are valued as part of intervention 3.

Table 2.5: Cost of the engagement process intervention

Resource identification and measurement	Resource value $
Direct engagement with communities	
Phone call & follow-up to Mayor	
Time spent to identify Mayors (2 hour x junior staff salary)	85
Time spent by senior staff talking to Mayor (20 minutes x senior staff salary)	230
Actual phone call (20 minutes x Mayor salary)	48
Time spent to generate generic follow-up letter for Mayor (4 hours x junior staff salary)	169
Adapt letter for each town (5 minutes x 10 towns x admin. staff salary)	27
Material for mailing (stamps/printing/envelope ($0.69) x 10 towns)	7
Sub-total	*567*
Inviting key stakeholders	
Time spent identifying key stakeholders (1 hour x admin staff salary x 10 towns)	330
Adapt letter for each town (5 minutes x 10 towns x admin staff salary)	27
Material for mailing (stamps/printing/envelope ($0.69) x 10 towns x 20 stakeholders)	138
Sub-total	*495*
Initial community meeting	
Time spent to organise meeting (4 hours x 10 towns x admin staff salary)	1,320
Time to prepare materials for meeting & town coordination (1hr senior, 1hr junior staff x 10 towns)	1,115
Cost of handout ($0.28c per page x 20 people x 10 towns)	56
Venue related costs ($100 room hire x 10 towns)	1,000
Costs for senior staff (2 staff x ($290 travel/$130 meals/accommodation) x 10 towns)	8,400
Costs for community attendance (30 mins return trip x junior salary x 20 people x 10 towns)	4,237
Opportunity cost of senior staff presenting meetings (2 senior staff x 1 hour x 10 towns)	1,383
Opportunity cost of community people attending (20 people x 1 hr x junior salary x 10 towns)	8,473
Sub-total	*25,983*
Initial meetings with key stakeholders	
Time required to prepare materials for meetings and coordinate with towns (1 hour senior staff and 1 hour junior staff x 10 towns)	1,115
Cost of handout ($0.28c per page x 20 people x 10 towns x 4 meetings/town)	224
Venue related costs (meeting held at stakeholder workplace)	0
Transport senior staff (2 staff x ($290 travel + $130 meals/accomm) x 10 towns x 4 meetings/town)	8,400
Opportunity cost of senior staff presenting (2 senior staff x 1 hr x 10 towns x 4 meetings/town)	5,531
Opportunity cost of key stakeholder meeting time (2 people x 1 r x senior salary x 10 towns)	5,531
Sub-total	*20,801*
Media release (captured as part of intervention 3) *Sub-total*	*0*
Follow up letters to attendees	
Generating generic feedback letter template (4 hours x senior staff salary)	277
Adapt letter for each town (5 minutes x 10 towns x admin staff salary)	27

Material for mailing (stamps/printing/envelope ($0.69) x 10 towns x 50 attendees	345
Sub-total	*649*
Indirect engagement with communities	
Time to draft letter to Minister (2 hours x senior staff salary)	138
Opportunity cost of Meeting with Minister (2 hours x 2 senior staff salary and Minister salary)	423
Transport costs to attend meeting with Minister (travel by car $100 total)	100
Time to draft letter for Minister to send to senior bureaucrats (2 hours x admin staff salary)	66
Material for mailing (stamps/printing/envelope ($0.69) x 15 departments)	10
Sub-total	*738*
Meeting with senior government officials	
Time required to prepare materials for meetings and coordinate with government official departments ((1 hour senior and 1 hour junior staff) x 15 departments)	1,673
Transport costs to attend meeting with senior govt officials (travel by car $100 x 15 depts)	1,500
Opportunity cost of senior staff presenting meetings (2 senior staff x 1 hour x 15 departments)	2,074
Opportunity cost of govt official meeting time (1 person x 1 hr x senior staff salary x 15 depts)	1,037
Sub-total	*6,284*
TOTAL	**55,517**

2. Feedback of data and results to key stakeholders

Background

The importance of feedback in promoting behaviour change is widely recognised in theoretical models, such as the Precede-Proceed Model of Health Promotion Planning[47] and the Diffusion of Innovations[48]. In the context of the AARC project, feedback of data specifically related to each community was provided on two levels:

- Feedback to the general community (see intervention three in the next section); and
- Feedback to key stakeholders. Feedback to key stakeholders was regarded as important for two reasons: first, to help guide the intervention implementation process; and second, to provide ongoing information on rates of alcohol-related harm over time, as different types of data were analysed.

To facilitate feedback to key stakeholders, a community coalition was formed comprising representatives perceived as having an important role in reducing alcohol-related problems in the community. It was expected that the coalition would consist of local government or council representatives, police, general practitioners, community health workers, educationalists, hospital Emergency Department staff, representatives from major local employers and representatives from local community groups. Given their disproportionate vulnerability to alcohol-related harm, members of local indigenous communities were specifically invited to be part of the community coalition. The coalition was asked to nominate a representative with whom the research team could readily liaise. An iterative process of negotiation was developed between researchers and the community coalition which resulted in a mix of evidence based strategies (eg. media advocacy) and strategies that had little evidence for their effectiveness but were highly appealing to the communities (eg. school-based intervention).

Timeline of intervention implementation

Feedback of data to key stakeholders occurred throughout the project, from its inception in 2004 through to the end of the intervention period in December 2009.

Description of intervention components and implementation process

As part of the engagement process, the communities agreed to a group of key stakeholders who would comprise the community coalition. This group was given the option of meeting periodically or being updated electronically, principally via email. All community coalition groups initially opted for face-to-

face meetings, at least until the project was established. During the engagement meetings, it was agreed that the community coalition would meet again after the initial community survey and analyses of routinely collected data had occurred, so the AARC team could brief the coalition on the results and identify possible interventions for discussion. After the engagement meetings had occurred in 2004, however, the NSW Government began active steps to require all local government areas to establish a liquor accord. The membership of each accord was to include, as a minimum, representatives from local government, police and private business, and the accords were overseen by the NSW Office of Liquor, Racing and Gaming. As a consequence, although the agreed meeting with the community coalition did occur in 2005, it was agreed at that meeting that the role of the community coalition ought to be merged with the local liquor accord group, given significant overlap in the membership of these groups. In one community which was yet to establish a formal liquor accord, the community coalition persisted.

Researchers met periodically with the liquor accord group in each community to:

- Plan and provide feedback on the high risk weekends intervention;
- Discuss the possibility of implementing new interventions;
- Provide feedback on various data analyses as they were completed; and
- Identify specific members of the accord who were willing to comment on the media releases in order to provide a local perspective on the relevant data or intervention.

Costs

Table 3.7 provides an overview of the feedback of data and results to key stakeholders' intervention costs. Total intervention costs are estimated at $81,718 for the four year period 2006-2009. The majority of costs related to expert (labelled senior staff) transport costs at 62% of total costs. Three resource items are not valued given these activities occur within the normal liquor accord meetings.

Table 2.6: Cost of the feedback of data and results to key stakeholders intervention

Resource identification and measurement	Resource value $
Preparation and holding feedback meetings	
Time spent to organise meeting (Conducted as part of usual liquor accord meeting)	0
Time required to prepare materials for meetings and coordinate with towns ((1 hour senior staff and 1 hour junior staff) x 10 towns x 3 meetings each year x 4 years))	13,381
Transport costs for senior staff (1 senior staff x ($290 travel + $130 meals and accommodation) x 10 towns x 3 meetings each year x 4 years)	50,400
Transport cost of community people to attend meeting (conducted as part of usual liquor accord)	0
Opportunity cost of senior staff presenting meetings (1 senior staff x 1 hour x 10 towns x 3 meetings each year x 4 years)	8,297
Opportunity cost of community people meeting time (Conducted as part of usual liquor accord)	0
Cost of handout ($0.28c/page x 4 pages x 10 people x 10 towns x 3 meetings each year x 4 years)	1,344
Venue related costs (Conducted as part of usual liquor accord meeting)	0
Time of community representative to review media release related to data / intervention (1 hour senior staff equivalent x 10 towns x 3 times per year x 4 years)	8,297
TOTAL	**81,718**

NB: expenses for year 1 captured in intervention 1

3. Media advocacy (feedback to communities)

Background

Results from previous community-based alcohol trials have suggested that media advocacy is effective in reducing problem drinking[8-13]. Outcomes from the largest community-based alcohol trial internationally, prior to AARC, resulted in a number of recommendations, including: that although media advocacy alone is insufficient to achieve an impact, information presented through local news media is more effective than public service announcements or paid advertising[12]. It also found local evaluation data provides useful local specific data of interest to generate news items and that the audiences for newspaper and TV media are different, although both are affected[12]. The media advocacy component of AARC was the primary mechanism by which ongoing alcohol-related data were fed back to the general community (as opposed to the previous strategy which was aimed at key-stakeholders). Specifically, this intervention aimed to generate a substantive increase in the number of alcohol-related news items.

Timeline of intervention implementation

Media advocacy occurred throughout the project, from its inception in 2004 through to the end of the intervention period in December 2009.

Description of intervention components and implementation process

Media advocacy occurred to coincide with every new or updated data analyses, and to coincide with the implementation and completion of interventions. The local media campaign was restricted to local newspapers and radio to help prevent contamination of the control communities, which is much more likely to happen through regional or state-wide television news and other programs. Media advocacy also formed a specific and integral component of the intervention that aimed to identify and target high-risk weekends (see intervention number 10).

The specific procedure for the media advocacy intervention was:

- Research assistant identified all local newspapers and radio stations in each community;
- All local newspaper editors and radio station managers were invited to attend the key stakeholder meetings and the community meetings, at which their agreement to publish alcohol-related data and news about the interventions and surveys was obtained;
- Separate meetings were organised and held between senior staff and newspaper editors and radio station managers (at their offices) to agree to the best method to inform them about opportunities for them to publish relevant data; and
- Media releases, based on the agreed format and distribution method (fax or email), were distributed to coincide with major AARC initiatives and following data analyses.

Costs

Table 2.8 provides an overview of the media advocacy (feedback to communities) intervention costs. Total intervention costs are estimated at $195,393 for the four year period 2006-2009. The majority of costs related to the cost of media releases at 90% of total costs. The costs associated with meeting with media outlets are valued in intervention 1.

Table 2.7: Cost of the media advocacy (feedback to communities) intervention

Resource identification and measurement	Resource value $
Identify media outlets and meetings	
Time spent to identifying media, meeting with them (captured in intervention 1)	0
Specific intervention meetings with media	0
Specific meetings were organised and held between senior staff and newspaper editors and radio station managers (at their offices) to agree to the best method to inform them about opportunities for them to publish relevant data (captured in intervention 1)	0
Sub-total	*0*
Media release	
Generating and distributing media release (2 hours of time x junior staff salary x 4 releases per year x 10 towns x 4 years)	13,557
Time spent by senior staff to review each media release (30 minutes per release x senior staff salary x 4 releases per year x 10 towns x 4 years)	5,531
Media release (print x 1/3 page x 4 releases per town each year x 10 towns x 4 years)	112,961
Media release (radio message x 4 releases x 10 towns x 4 years)	63,344
Sub-total	*195,393*
TOTAL	**195,393**

4. GPs: screening and brief intervention

Background

In addition to the risk of harm to individuals from alcohol misuse[49], chapter 2 shows some communities are also at greater risk of different types of alcohol-related harm than others. In reducing the risk to individuals, Brief Intervention (BI) delivered in general practice has been shown to have a positive effect in most randomised control trials (RCTs), with a mean difference in reduction of alcohol consumption of 38 grams per week (g/wk) in intervention groups compared to controls[50,51]. BI delivered by GPs has also been found to be more cost-effective than standard care[52,53] and more cost-effective than other population-level interventions aimed at reducing the disease burden from alcohol misuse[54]. The problem to date, however, has been finding a way to encourage GPs to implement screening and BI as part of their routine practice[55]. Consequently, the aim of this intervention was to increase the frequency and rigour with which AARC GPs screen their patients to establish their alcohol-related risk status and, where appropriate, provide a BI.

Timeline of intervention implementation

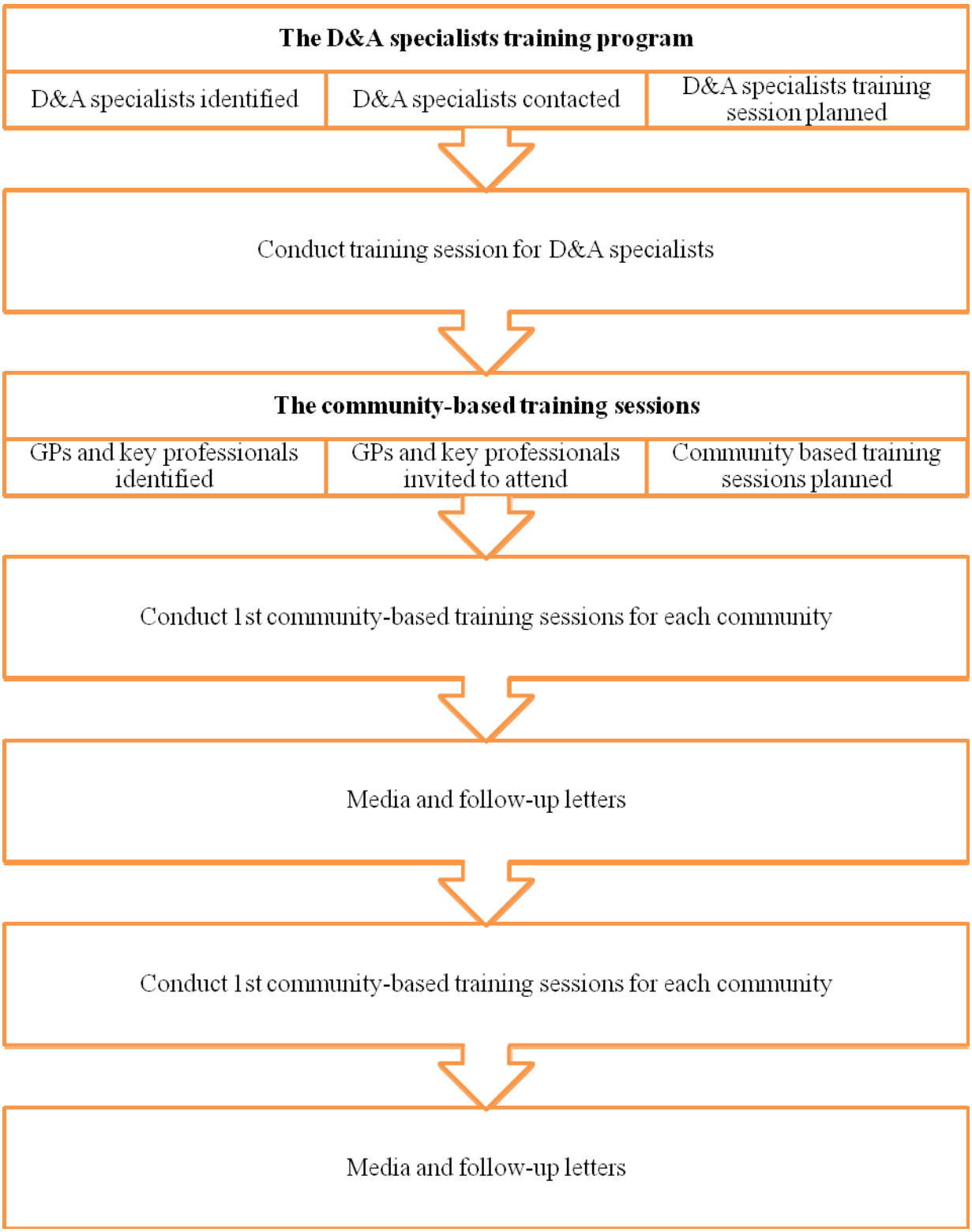
The GP screening and brief intervention strategy for all AARC communities occurred in the period October 2004 to August 2005.

Description of intervention components and implementation process

As summarised in Figure 2.4, this intervention comprised a number of sequential steps:

- Identifying, inviting and training alcohol clinical specialists to deliver the intervention;
- Conducting two training sessions for each of the 10 AARC intervention communities; and
- Media and follow-up procedures (after both community training sessions).

Figure 2.4: The sequential steps for the GP screening and brief intervention strategy



Training session for D&A Specialists to deliver the intervention

Eight Drug and Alcohol Addiction specialists agreed to attend this training, provide two training sessions in a community and act as a community liaison consultant for the local GPs (Gilbert Whitton, Kate Conigrave, Greg Whelan, Adam Winstock, Paul Haber, Bob Batey, Tony Gill, John Saunders). Two specialists did two geographically proximate communities. This two-hour train-the-trainer type session for the specialists reviewed the draft presentation and updated information based on the specialists' knowledge, introduced them to the Drinkless kit and covered the requirements for each session in the community. Ninety minutes was spent on the brief intervention and structure of the training sessions and 30 minutes on pharmacotherapies, a time split that reflects the specialists' existing knowledge on treating alcohol dependence.

Training sessions for the 10 AARC intervention communities

In line with its community wide-approach, GPs and other key stakeholders in the 10 intervention communities in the AARC project were invited to participate in two training sessions, approximately three months apart, to provide them with improved skills for delivering screening and BI for alcohol. Those invited to attend the sessions included the local Division of GPs liaison officer, GPs, hospital staff, drug and alcohol counsellors, high school principals and counsellors, ambulance officers, probation & parole staff and pharmacists. The training sessions were approved for continuing medical education points by the Royal Australian College of General Practitioners (RACGP).

Both training sessions were conducted by drug and alcohol clinical experts in late 2004 or 2005. Wherever possible the same clinical expert conducted both sessions in the same community, in order to optimise continuity. The sessions were organised with help from the liaison officer at the relevant Division of General Practice, who was responsible for setting the date, booking the venue and equipment and inviting their GPs to the training. The AARC research team invited all other potential attendees.

Each session lasted approximately 2 hours. The first session focussed on:

- Providing the latest evidence on recent advances in the detection and management of alcohol problems, including a review of recently available blood tests and of the pharmacotherapies for dependence (one hour);

- Training in brief intervention using the Drinkless kit, an evidence-based screening and brief intervention kit readily available at the time this component of the AARC intervention was implemented. All participants received a Drinkless kit. The Drinkless kit uses the AUDIT questionnaire as the screening tool to assess patients' drinking, the results of which determined the appropriate course of action. The Drinkless kit promotes the FLAGS acronym to guide the brief intervention process: Feedback to patients on their level of drinking relative to normative data; Listening to patients views on their own drinking patterns and behaviours; Advising patients on lower risk levels of drinking and the benefits they would obtain from drinking less; Goal setting; and identifying practical Strategies to help patients achieve their goals. As well as use of the kit, this session included discussion of case studies and a briefing on the NSW Road Traffic Authority's Alcohol Interlock Program; and
- The final part of this session provided participants with an opportunity to comment on a draft media release (which was sent to GPs prior to the session) and raise any questions or concerns they have about treating alcohol-related problems.

The second session focussed on:

- Recap of Drink-less program, especially for those who did not attend the first session; review of practical issues that have come up in use of screening or brief intervention techniques, with a problem solving focus (one hour); and
- The detection and management of alcohol problems and benzodiazepine dependence using case studies and general questions (one hour).

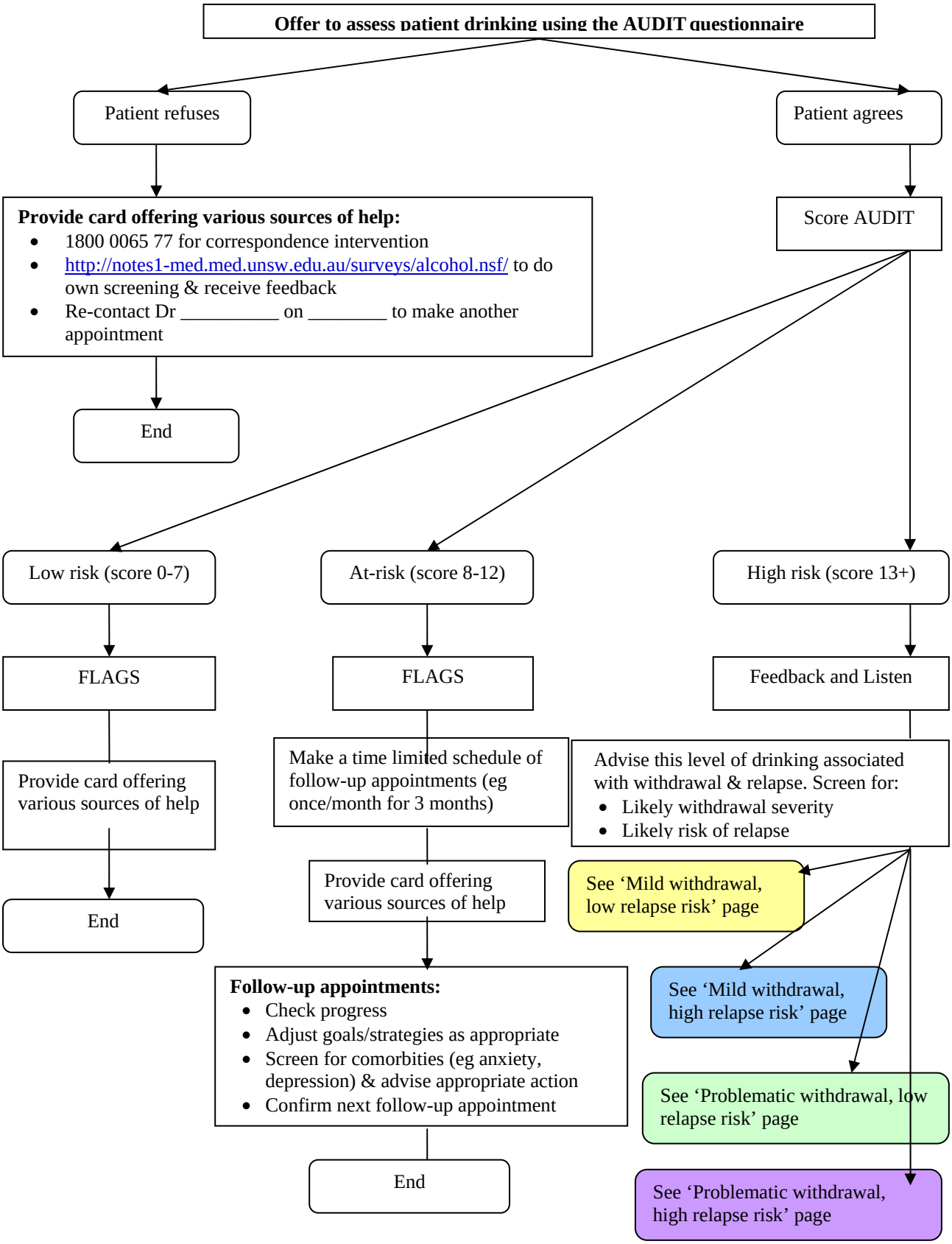
Follow-up and ongoing support

Attendees were documented to allow costing of the sessions. GPs were given contact details for the D&A specialist who did their training so they could follow up with any subsequent questions. A follow-up letter was sent to all participants, and all GPs who did not attend (a slightly different version), thanking them for their attendance and/or summarising the outcomes from the training session.

Media release

After agreement from all those attending the training sessions (both the first and second), a media release was distributed to local media (newspapers and radio).

Figure 2.5: Logic flow for the provision of screening and brief intervention


Offer to assess patient drinking using the AUDIT questionnaire
Patient refuses
Patient agrees
Provide card offering various sources of help:
1800 0065 77 for correspondence intervention
http://notes1-med.med.unsw.edu.au/surveys/alcohol.nsf/ to do own screening & receive feedback
Re-contact Dr _____ on _____ to make another appointment
End
Score AUDIT
Low risk (score 0-7)
At-risk (score 8-12)
High risk (score 13+)
FLAGS
FLAGS
Feedback and Listen
Provide card offering various sources of help
End
Make a time limited schedule of follow-up appointments (eg once/month for 3 months)
Advise this level of drinking associated with withdrawal & relapse. Screen for:
Likely withdrawal severity
Likely risk of relapse
Provide card offering various sources of help
See 'Mild withdrawal, low relapse risk' page
See 'Mild withdrawal, high relapse risk' page
Follow-up appointments:
Check progress
Adjust goals/strategies as appropriate
Screen for comorbities (eg anxiety, depression) & advise appropriate action
Confirm next follow-up appointment
See 'Problematic withdrawal, low relapse risk' page
End
See 'Problematic withdrawal, high relapse risk' page

Costs

Table 2.8 provides an overview of the GP screening and brief intervention costs. Total intervention costs are estimated at $26,167. As indicated above, certain resources (planning the first training session, trainer costs and opportunity / travel cost of participants) were evenly allocated across both GP interventions (i.e., intervention 4 and intervention 5) to reflect the correct allocation of these resource costs to each specific intervention. Ninety-five percent of all costs were attributable to the cost of training. The cost associated with media resource requirements is valued in intervention 3.

Table 2.8: Cost of GP screening and brief intervention

Resource identification and measurement	Resource value $
Planning the training program	
Time spent to identify D&A specialists, contact them and arrange 1st training sessions and arrange in community ((5 days x junior staff salary) x 50% as allocating half to intervention 5)	741
Time spent to contact GPs for 2nd session (1 day x junior staff salary)	297
Sub-total	*1,038*
1st community training session	
Trainer expenses (($290 travel; $130 meals and accommodation) x 8 venues x 50% as allocating half to intervention 5)	1,680
Venue related costs, including room hire/catering/equipment hire ($100 room hire + $40 / person for 40 people (39 participants + trainer) x 8 venues x 50% as allocating half to intervention 5)	420
Training materials, including provision of a Drinkless kit to all attendees ($30/kit x 39 participants)	1,170
Opportunity cost of expert time (2 hours x $200/hour x 8 venues x 50% as allocating half to intervention 5)	1,600
Opportunity cost of GPs to attend training (2 hours x 39 participants x GP hourly wage x 50% as allocating half to intervention 5)	3,680
Travel time for GP to attend training (30 minutes round trip x 39 participants x GP wage x 50% as allocating half to intervention 5)	920
Sub-total	*9,470*
Follow up letters to attendees	
Generating generic feedback letter template (4 hours x admin staff salary)	132
Material for mailing (stamp, priniting and envelope ($0.69) x 39 participants)	27
Sub-total	159
Media release (captured as part of intervention 3)	0
Sub-total	*0*
2nd community training session	
Trainer expenses (($290 travel; $130 meals and accommodation) x 8 venues)	3,360
Venue related costs, including room hire, catering and equipment hire (($100 room hire + $40 per person) x 31 people (30 participants + trainer) x 8 venues)	2,000
Opportunity cost of expert time (2 hours x $200 per hour x 8 venues)	3,200
Opportunity cost of GPs to attend training (2 hours x 29 participants x GP wage)	5,472
Travel time for GP to attend training (30 minutes round trip x 29 participants x GP wage)	1,368
Sub-total	*15,400*
Follow up letters to attendees	
Generating feedback letter (5 minutes x 29 participants x admin staff salary)	80
Material for mailing (stamp, priniting and envelope ($0.69) x 29 participants)	20
Sub-total	*100*
Media release (captured as part of intervention 3)	0
Sub-total	*0*
TOTAL	**26,167**

5. GPs: tailored feedback and training on alcohol prescribing

Background

Treatment for alcohol dependence usually begins with a detoxification program involving sedative medications to prevent withdrawal symptoms and can be followed by pharmacotherapies and psychosocial intervention to prevent relapse to heavy drinking and to support abstinence[56-60]. Current use of pharmacotherapies for relapse prevention is limited for a number of reasons: there are few available; the evidence for their effectiveness is mixed; they have different side-effect profiles for different types of patients; General Practitioners (GPs) report an absence of knowledge and skills in managing patients on pharmacotherapies; few alcohol dependent drinkers seek treatment; and addiction specialists who are most knowledgeable about pharmacotherapies are scarce and not readily accessible to patients, especially in rural areas[61-66]. Nevertheless, two pharmacotherapies, naltrexone and acamprosate, are subsidised by the Pharmaceutical Benefits Scheme (PBS) and the Repatriation Pharmaceutical Benefits Scheme (RPBS) in Australia[60], and there is clear evidence that they are underutilized[67,68].

GPs are in a good position to manage alcohol dependent patients on pharmacotherapies for relapse prevention and/or support of continuous abstinence. First, they are more accessible, especially in rural areas where specialists are few. Second, in theory, well managed patients in primary care should reduce the burden of hospitalizations for alcohol dependence, which is critical in rural areas where there are relatively fewer services, even though this relationship has not been shown empirically and, therefore, the cost-effectiveness of GP managed alcohol dependence has not been accurately quantified.

Tailored feedback has had mixed results on GP's prescribing behaviour, ranging from no to modest effects[69-72]. Given these current pragmatic limitations, a timely opportunity to examine prescribing patterns of pharmacotherapies for alcohol dependence in rural communities was provided by AARC project. This intervention aimed to implement and cost the effect of training and tailored, mailed feedback on increasing GP's prescribing of acamprosate and naltrexone.

Timeline of intervention implementation

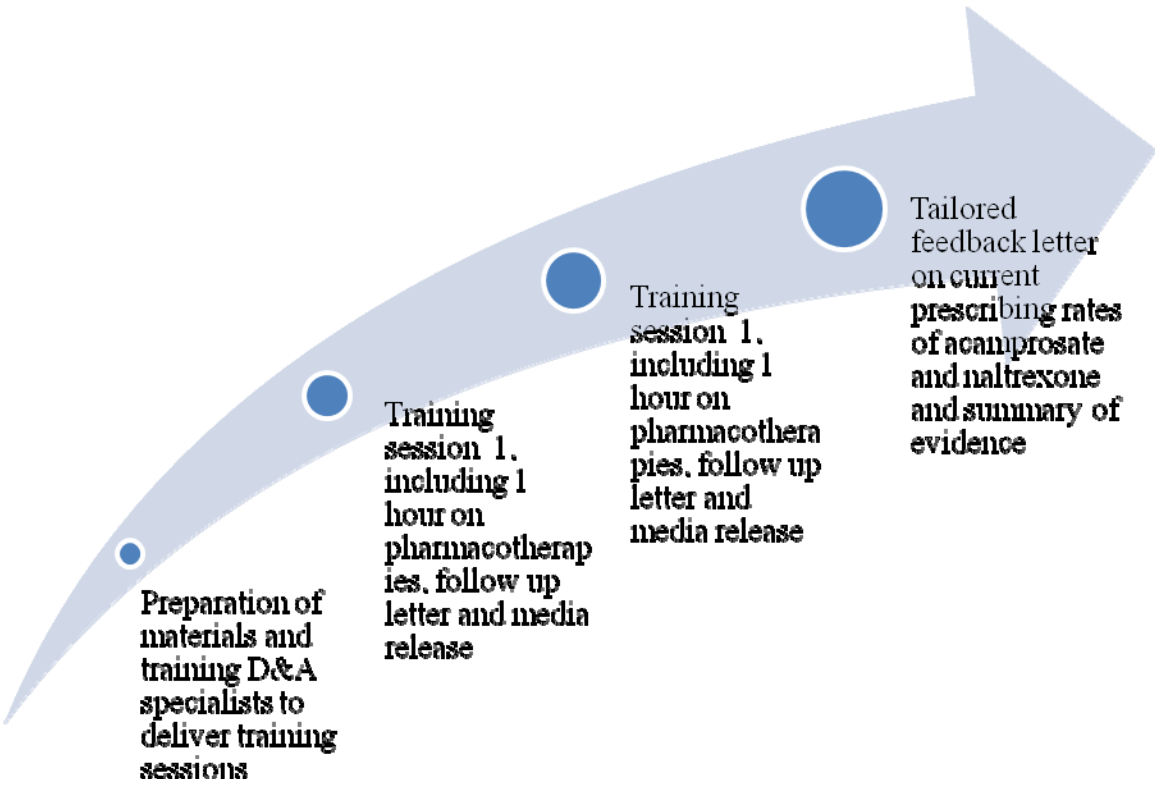
The training component of this strategy was implemented as part of the GP screening and brief intervention strategy (see previous section) in the period October 2004 to August 2005. The tailored, mailed feedback was implemented in all 10 experimental communities in August 2006.

Description of intervention components and implementation process

As summarised in Figure 3.6, this intervention comprised a number of sequential steps:

- Preparation of training materials and training of Drug and Alcohol Specialists to deliver the training sessions for the 10 AARC intervention communities.
- Conducting two training sessions for each AARC intervention community.
- Provision of a tailored feedback letter on current prescribing rates of acamprosate and naltrexone and summary of current evidence.

Figure 2.6: The sequential steps for the GP training and tailored, mailed feedback on their prescribing intervention



Training session for alcohol specialists to deliver the intervention

As summarised in the previous section, this two-hour train-the-trainer type session for the specialists reviewed the draft presentation and updated information based on the specialists' knowledge, introduced them to the Drinkless kit and covered the requirements for each session in the community. Ninety minutes was spent on the brief intervention and structure of the training sessions and 30 minutes on pharmacotherapies, a time split that reflects the specialists' existing knowledge on treating alcohol dependence.

Training sessions for the 10 AARC intervention communities

As described in the previous section, the first community-based training session delivered by a clinical alcohol specialist spent approximately one hour providing the latest evidence on recent advances in the detection and management of alcohol problems, including a review of recently available blood tests and of the pharmacotherapies for dependence. Similarly for the second community-based training session, an hour was spent discussing the detection and management of alcohol problems and benzodiazepine dependence using case studies and general questions.

Tailored feedback letter on current prescribing rates of acamprosate and naltrexone and summary of current evidence

The intervention consisted of personalised feedback in the form of a letter written by the lead AARC researchers (Associate Professor Anthony Shakeshaft and Professor Rob Sanson-Fisher), mailed in August 2006 to all GPs in the 10 AARC experimental communities (n=115). The structure and content of the letter were as follows.

- Structure of the letter. Letters were printed on A4 paper size for all GPs in the intervention communities. The front page contained in the top the logo of the AARC project, an introductory text, tailored information, and two references. Information was tailored by AARC researchers specifically to each community to which each GP belonged and included specific information on alcohol dependence related to that community from results obtained from respondents in the community survey.
- Content of the letter. The letter provided:
    - feedback from the AARC community survey data on the percentage of respondents reporting risky alcohol consumption and related harms, including alcohol dependence, in the GPs community;

- the percentage of alcohol dependent drinkers in Australia likely to be using either naltrexone or acamprosate;
- the percentage of alcohol dependent drinkers most likely to be using either naltrexone or acamprosate in the GP's community, based on 2004 data from the Health Insurance Commission (HIC) of the Commonwealth of Australia (HIC duties are performed today by Medicare Australia);
- information from the literature and a reference supporting GP's role in treating alcohol dependent drinkers with pharmacotherapies;
- information on availability of naltrexone and acamprosate in the PBS for GP prescription; and
- based on this evidence and on underutilization of pharmacotherapies for alcohol dependent drinkers in Australia as well as in the AARC communities, a suggestion that GPs could increase the rates at which they prescribe either naltrexone or acamprosate for alcohol dependent drinkers in their community was provided.

Costs

Table 2.9 provides an overview of the GP tailored feedback and training on alcohol prescribing intervention costs. Total intervention costs are estimated at $10,482. As indicated above, certain resources (planning the first training session, trainer costs and opportunity / travel cost of participants) were evenly allocated across both GP interventions (i.e., intervention 4 and intervention 5) to reflect the correct allocation of these resource costs to each specific intervention. Seventy-nine five percent of all costs were attributable to the cost of training. The cost of developing and posting the tailored feedback letter is estimated at $1,141 or 14% of total costs.

Table 2.9: GP tailored feedback on alcohol prescribing intervention costs

Resource identification and measurement	Resource value $
Planning the training program	
Time spent to identify D&A specialists, contact them and arrange 1st training sessions and arrange in community (5 days x junior staff salary) x 50% as allocating half to intervention 4)	741
Sub-total	*741*
1st community training session	
Trainer expenses (($290 travel; $130 meals and accommodation) x 8 venues x 50% as allocating half to intervention 5)	1,680
Venue related costs, including room hire/catering/equipment hire ($100 room hire + $40 per person for 40 people (39 participants + trainer) x 8 venues x 50% as allocating half to intervention 5)	420
Opportunity cost of expert time (2 hours x $200 per hour x 8 venues x 50% as allocating half to intervention 5)	1,600
Opportunity cost of GPs to attend training (2 hours x 39 participants x GP hourly wage x 50% as allocating half to intervention 5)	3,680
Travel time for GP to attend training (30 minutes round trip x 39 participants x GP wage x 50% as allocating half to intervention 5)	920
Sub-total	*8,300*
Development and posting of the tailored feedback letter	
Generating generic feedback letter template (4 hours x senior staff salary)	277
Adapt letter for each GP (5 minutes x admin staff salary x 115 GPs)	316
Material for mailing (stamp, priniting and envelope ($0.69) x 115 GPs)	79
Cost of GP reading letter (5 minutes x GP salary x 85% read)	769
Sub-total	*1,441*
TOTAL	**10,482**

6. Workplace policies and training

Background

AARC contracted the National Centre for Education and Training on Addiction (NCETA) to design and implement the intervention. NCETA was selected because they have expertise in workplace policies and training on drug and alcohol issues, and the Director (Professor Ann Roche) had previously worked on a separate community-based alcohol trial with the AARC investigators. The work was done by Dr Ken Pidd.

Timeline of intervention implementation

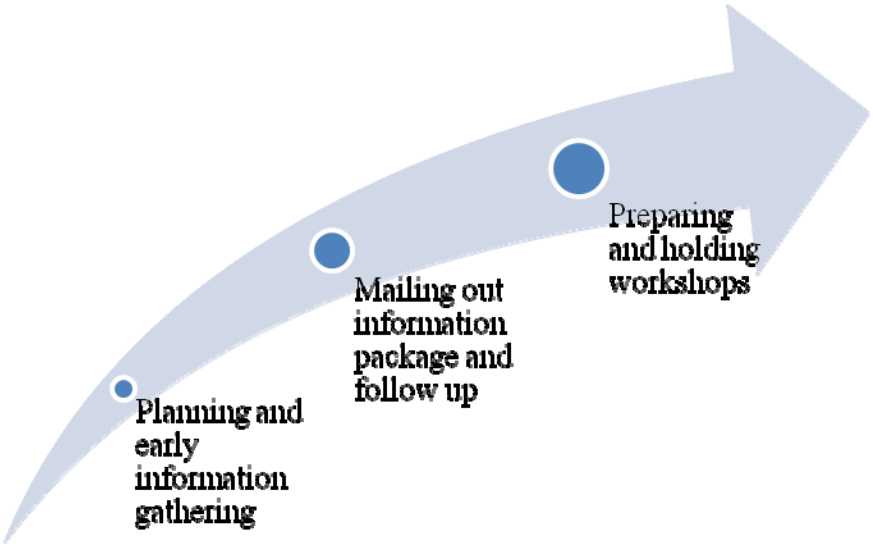
This intervention was implemented in September 2005.

Description of intervention components and implementation process

As summarised in Figure 2.7, this intervention comprised a number of sequential steps:

- Planning, early information gathering on likely effective workplace-based interventions and engaging and negotiating with NCETA.
- Mailing out the information package to workplaces in the 10 AARC intervention communities.
- Preparing for, and implementing, the workplace-based workshops.

Figure 2.7: The sequential steps for the workplace policies and training intervention



Identifying workplaces

The workplaces eligible to participate were identified according to the following process:

- Only major workplaces were included (at least 10 employees);
- To identify the major employers, AARC staff emailed the local council in each community (the business development officer) asking for a full list of employers in their town, ranked from the largest to the smallest;
- AARC passed this list of workplaces onto NCETA, who added to the list by searching the internet and following up with local councils; and
- This process resulted in the identification of 49 workplaces across the 10 intervention communities.

The intervention

This intervention consistent of four components:

- Phone call to major employers in each intervention community to gauge their interest in participating:
  - Contact was made with the Occupational Health and Safety Manager or the Human Resources Manager;
  - Local councils were contacted first to provide local support/motivation for others; and
  - The manager was told about the AARC project and how workplaces fitted into the project, given some brief detail about the project and asked if they'd like to participate further.
- Mailed information for those who asked for it in Step 1, containing:
  - A letter inviting the workplace to participate in the project;
  - A flyer outlining the 'Reducing Alcohol-Related Harm in Rural Communities' project and where the workplace fits within this project;
  - A flyer outlining what the workplace component of this project entails;
  - A flyer outlining why employers should be concerned about employees' unsafe alcohol use; and
  - The cover and contents pages of a resource kit titled: "Responding to alcohol and other drug issues in the workplace: an information and resource kit."
- Option to receive a full resource kit in the mail. It should be noted that this resource kit already existed and was not developed specifically for the AARC project.
- The opportunity to attend a six hour training workshop, which covered the following:
  - Developing a workplace alcohol and other drug policy
  - types of drugs, their effects, and potential consequences for the workplace
  - training and educating employees
  - other useful prevention and intervention strategies
  - strategy/response evaluation
  - a list of useful contacts for obtaining further assistance and resources
  - Workplace representatives that attended the training workshop received the resource kit "Responding to alcohol and other drug issues in the workplace: An information and resource kit." This kit contained the information used in the training workshop and additional resources that could be utilised to develop and implement a workplace response to alcohol-

related harm. Workplace representatives that were interested but could not attend the training workshop also received a copy of this kit.

Implementing the intervention

The workplace intervention was implemented according to the following protocols:

- The search identified 49 eligible workplaces across the 10 intervention communities, of which 3 were no longer in business. Of the 46 eligible and existing workplaces, 2 (4%) refused to be involved, leaving 44 eligible and consenting workplaces (intervention step 1). These were distributed across the intervention communities as follows:
  - Tumut 6 workplaces
  - Corowa 4 workplaces
  - Parkes 4 workplaces
  - Forbes 2 workplaces
  - Griffith 3 workplaces
  - Leeton 5 workplaces
  - Kempsey 6 workplaces
  - Grafton 5 workplaces
  - Gunnedah 5 workplaces
  - Inverell 4 workplaces
- Of 44 workplaces that consented, all were mailed the information package (intervention step 2). Ten responded and 34 had to be phoned to see what they wanted to do.
- All 44 workplaces were mailed the resource kit titled: Responding to alcohol and other drug issues in the workplace: An information and resource kit (intervention step 3).
- Of the 44 workplaces, 25 (57%) expressed an interest in also attending the training workshop (intervention step 4).
- In total, 22 workplaces were represented at the workshops (88% of those interested in attending a workshop and 50% of those who consented to some involvement). In order to reduce the costs of travel and increase the number of participants in each workshop, only 6 workshops were held:
  - 6/9/05 – Corowa Council Chambers, 8 attendees from 3 different workplaces;
  - 7/9/05 – Tumut Council Chambers, 6 attendees from 3 different workplaces;
  - 8/9/05 – Leeton Council Chambers, 6 attendees from 5 different workplaces (incl Griffith);

  - 9/9/05 – Parkes Council Chambers, 4 attendees from 4 different workplaces (incl Forbes);
  - 28/9/05 – Inverell Riverside Function Centre, 8 attendees from 4 different workplaces (incl Gunnedah);
  - 30/9/05 – Kempsey Council Chambers, 3 attendees from 2 different workplaces; and
  - Grafton was cancelled due to low numbers.

- Where possible, the workplace training workshop and resources were linked with smaller workplaces and groups s in the community to address alcohol related issues in the workplace. An example from one community was the Road Safety Officer providing safe workplace party tips to local businesses, which led to this material being offered to all towns via the AARC website.

Costs

Table 2.10 provides an overview of the workplace policies and training intervention costs. Total intervention costs are estimated at $27,655. The costs of mailing the information package and following up with workplaces that did not receive the original package are estimated at $4,621. However, the majority of costs (71%) were related to the cost of implementing the intervention. It is important to note that implementation costs are specifically related to resources required to conduct the training session. No consideration is given to measuring and valuing resource use by individual workplaces that implemented strategies as a consequence of the training session.

Table 2.10: Cost of the workplace policies and training intervention

Resource identification and measurement	Resource value $
Identifying workplaces	
Initial email to local council to assist in identifying major workplaces (20 minutes x admin staff salary x 10 towns)	110
Time spent by the business development officer to identify workplaces and respond to request for information (2 hours x junior staff salary x 10 towns)	847
Sub-total	*957*
Mailing out of information package and follow-up	
Phone call to major employers (15 mins per call x $0.40 per call x 46 workplaces)	18
Opportunity cost of time for business developent officer to call (15 minutes x junior staff salary x 46 workplaces)	487
Opportunity cost of time for workplaces (15 minutes x senior staff salary x 46 workplaces)	795
Time spent to generate and send letter for each workplace (4 hours x junior staff salary)	169
Cost of materials ($20 per package x 44 workplaces)	880
Material for mailing ((stamp, resource kit and envelope = $5.00 per package) x 44 workplaces)	220
Time required to followup with those workplaces that did not respond (10 minutes x admin staff salary x 34 workplaces)	187
Time spent by personnel at 44 workplaces to respond (seeking approval from the management) (1 hour x junior staff salary x 44 workplaces)	1,864
Sub-total	*4,621*
Implementing the intervention	
Time spent coordinating training session (1 hour x admin staff salary x 22 workplaces)	726
Trainer expenses (($290 travel; $130 meals and accommodation) x 6 workshops)	2,520
Venue related costs, including room hire, catering and equipment hire ($100 room hire + $40 per person x 36 people (35 participants + trainer))	820
Opportunity cost of expert time (4 hours x $200 per hour x 6 workshops)	4,800
Opportunity cost of participants time to attend workshops (4 hours x senior staff salary x 35 participants)	9,679
Travel time for participants (30 minutes x senior staff time x 35 participants)	1,210
Sub-total	*19,755*
Pre- and post-test surveys	
Generating pre-and post test surveys (4 hours per survey x 2 surveys x senior staff salary)	553
Material for mailing surveys (printing 5 pages @ 28c per page) x envelope + posting ($0.41) x 35 participants' x 2 surveys	127
Opportunity cost of participants time to complete surveys (20 minutes x senior staff time x 2 surveys)	1,613
Material for mailing surveys back ((stamp and envelope = $0.41) x 35 participants x 2 surveys)	29
Sub-total	*2,322*
TOTAL	**27,655**

7. High school based interactive session on alcohol harms

Background

A literature review conducted by the AARC research team showed that when AARC commenced there was relatively little evidence from well-controlled trials for the effectiveness of school-based interventions[42].

Nevertheless, the AARC community survey showed that a school-based intervention was selected by the vast majority of respondents as being important (88%) and was allocated the greatest proportion of a hypothetical budget (38%). Further, the key stakeholder meetings, at which data analyses from the survey and routinely collected measures were fed back to communities, clearly identified a strong community preference for a school-based intervention. Conversely, a survey of drug and alcohol professionals ranked school-based interventions, and the amount of funding they would allocate to school-based interventions, second last, preferable only to pharmacy based intervention (37% and 11% respectively). As a compromise between the community survey and key-stakeholder preference, and the research evidence and professionals' views, a high-school based intervention was designed that was carefully targeted toward preventing alcohol harm among young people and would require minimal intervention resources.

Timeline of intervention implementation

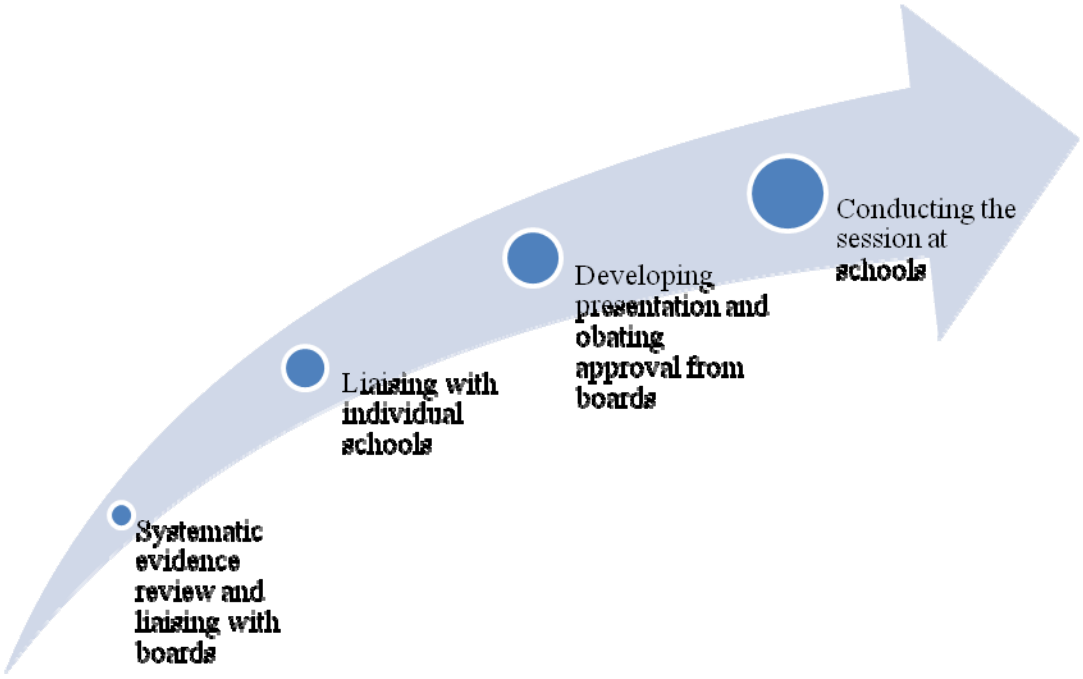
This intervention was implemented between October 2005 and November 2006.

Description of intervention components and implementation process

As summarised in Figure 2.8, this intervention comprised a number of sequential steps:

- Conducting a critical review of the evidence, planning the intervention and liaising with the NSW Department of Education and Training (DET), as well as the governance boards for the independent schools (Association of Independent Schools) and the Catholic schools (Catholic Education Office);
- Liaising with individual schools regarding the most suitable date to conduct the session and the most efficient process for the evaluation component of this intervention;
- Developing the presentation and ensuring it was approved by NSW DET and the other school governing boards, where required; and
- Implementing the agreed intervention in each school.

Figure 2.8: Sequential steps for the high-school based interactive session on alcohol harms



Consent to conduct an intervention and organising the schedule of visits

Associate Professor Anthony Shakeshaft and Professor Rob Sanson-Fisher met with the NSW Department of Education and Training (DET) and negotiated with them to provide an interactive information session for senior high school students in each state high school in the AARC intervention communities. DET opted to conduct an evaluation and report of this component of the intervention. In addition to state high schools, Associate Professor Anthony Shakeshaft negotiated successfully with the Association of Independent Schools (AIS) and the Catholic Education Office (CEO) to also be able to offer the intervention to the independent and Catholic schools in each of the AARC intervention communities.

Procedure

This intervention consistent of three components:

- A letter was sent to the principal at all schools. The NSW DET sent a letter to all state schools in the AARC intervention communities informing them about the possibility of their being involved in this study. It indicated that their involvement would require:
    - Finalising the timing of the presentation with a member of the AARC research team;

  - Distribution of the consent form to, and collection from, students;
  - The coordinating teacher to complete a survey about drug education in their school and his/her perceptions of this interactive session;
  - The coordinating teacher to administer a pre-intervention survey to attending students and staff immediately prior to the presentation, and a second survey a week after the presentation; and
  - The coordinating teacher to mail all completed surveys to the DET.

- A similar letter was sent by the AARC research team to AIS and CEO schools to outline the intervention, invite their participation and provide reassurance that their relevant regional or state office had agreed to the AARC project writing to the school to seek their permission to participate. This letter requested that if the school was interested, that the appropriate person contact a nominated AARC research assistant who would co-ordinate the session. Where no contact was made after a week, an AARC research assistant rang the school to confirm receipt of the letter and seek permission to speak to the appropriate person. Unlike the state schools, there was no attempt to evaluate this specific intervention: it was not required by the AIS or CEO; and the difficulty, and methodological quality, of conducting a sufficiently rigorous evaluation for an intervention that in itself was not the main focus of the AARC study was judged by the research team to impose too great a burden on the time and resources of the AARC project.

- The schedule of visits was organised. An AARC Research Assistant liaised with the appropriate representative from all schools who agreed to participate to schedule a time for the intervention to occur. Some sessions were timed to coincide with events involving these young people that are typically associated with them drinking alcohol, such as end-of-year school formals and parties. In some of the smaller communities, young people in one school travelled to another school so that the session could be implemented for both schools simultaneously. The sessions were held in each school between October 2005 and November 2006, as follows:
  - October 2005 – Corowa;
  - April 2006 – Griffith and Tumut;
  - June 2006 – Gunnedah;
  - August 2006 – Kempsey and Leeton;
  - October 2006 – Parkes, Forbes and Inverell; and
  - November 2006 – Grafton.

The intervention and its implementation

The interactive session comprised the following.

- A one-hour interactive session with senior students, presented by the National Drug and Alcohol Research Centre's (NDARC) Media Liaison/Information Manager, Mr Paul Dillon. In order to ensure the intervention was of optimal relevance to young people likely to already be engaging in risky alcohol consumption, it was targeted to Year 11 students: Year 12 students were excluded on the basis of their final year school and study commitments.
- A power point presentation, approved by DET, was developed and used as the basis for stimulating discussion. The presentation was titled Young People and Risk Taking. The presentation covered the following material.
    - The concept of risk taking, especially in adolescence, minimising risks and the importance of planning ahead.
    - Defining different classes of drugs, and drug use mortality and morbidity in Australia.
    - Use, effects and guidelines for specifically for alcohol, identifying the major harms and their particular relevance in rural Australia.
    - The concept of alcohol poisoning or intoxication, including how you can tell if somebody is at high risk and what to do about it if that situation arises.

Costs

Table 2.11 provides an overview of the high school based interactive session on alcohol harms intervention costs. Total intervention costs are estimated at $13,098. Resource use associated with intervention planning and liaison with boards is valued as part of original stakeholder meetings in intervention 1 and has not been replicated here. There was, however, a need to liaise with school officials that incurred a minimal cost. Sixty-six percent of all costs were attributable to the cost of implementation of the intervention. Student participation time was not costed in this analysis.

Table 2.11: Cost of the high school-based interactive session on alcohol harms intervention

Resource identification and measurement	Resource value $
Intervention planning and liaison with boards	
Time spent to arrange meetings with NSW Department of Education and Training (DET), Association of Independent Schools and the Catholic Education Office (captured in intervention 1)	0
Opportunity cost of expert time spent meeting with DET, AIS and CEO (captured in intervention 1)	0
Opportunity cost of participants from DET, AIS and CEO (captured in intervention 1)	0
Sub-total	*0*
Liaison and planning with individual schools	
Time spent identifying schools and generating letters (1 hour x admin staff salary x 10 towns)	330
Material for mailing ((stamp, printing and envelope ($0.69) x 35 schools)	24
Time spent following up schools (1 day admin staff salary)	231
Sub-total	*585*
Liaison and planning with AIS and CEO	
Time spent identifying AIS and CEO and generating letters (2 hours x admin staff salary)	66
Material for mailing ((stamp, printing and envelope ($0.69) x 5 letters)	3
Sub-total	*69*
School responsibility	
Time spent developing consent form, children survey and teacher survey (8 hours junior staff salary + 2 hour senior staff salary + 2 hour department of education (assume senior staff time))	615
Finalising the timing of the presentation with a member of the AARC research team (30 minutes x 35 teacher's salary)	752
Distribution of consent form to, and collection from, students (5 mins x teacher salary x 35 schools)	125
The coordinating teacher to complete a survey about drug education in their school and his/her perceptions of this interactive session (20 minutes x teacher salary x 35 schools)	501
The attending students completed a pre-intervention survey immediately prior to the presentation, and a second survey a week after the presentation - not valuing students time	0
The attending staff / teachers completed a pre-intervention survey immediately prior to and after the presentation (20 minutes x 2 teachers x teacher salary x 2 surveys x 35 schools)	1,002
Coordinating teacher to mail all completed surveys to DET (30 mins x teacher salary x 35 schools)	752
Material for mailing ((stamp, printing and envelope ($0.69) x 35 schools)	24
Sub-total	*3,772*
Intervention implementation	
Time spent by expert developing intervention (2 days x senior staff salary)	968
Trainer expenses (($290 travel; $130 meals and accommodation) x 10 towns)	4,200
Opportunity cost of trainer time (1 hour x $200 per hour x 10 towns)	2,000
Opportunity cost of teachers time (1 hour x teacher salary x 35 schools)	1,504
Sub-total	*8,671*
TOTAL	**13,098**

8. Pharmacy-based screening and brief intervention

Background

As identified in Section 4, primary care has long been considered an ideal setting for population-level prevention on the basis that the vast majority of a population access primary care services. Health professionals other than GPs, however, can play an important role in delivering health promotion in primary care. Community pharmacists are in an ideal position to deliver alcohol BI for a number of reasons: first, they can access vulnerable sub-populations who rarely discuss their health or drinking behaviour with GPs, particularly young males; second, they are regarded as a valuable source of information on health education and referral for a range of health matters; and third, anaccepted part of their medication dispensing role is to provide relevant information on alcohol and other drug interactions[73-75].

Although pharmacist delivered screening and BI for alcohol misuse appears feasible, only two intervention outcome studies have been published[73,76]. Across both studies the average proportion of risky drinkers reducing any consumption was 34%, but only one study reported the mean reduction in alcohol consumption after BI: 2.8 units per week , equivalent to 22.4 g/wk [30]. Given the promise of pharmacy-based interventions, the clearly equivocal nature of the research evidence and the engagement of pharmacists in the GP-focused training workshops (as part of AARC's broad-based communityapproach), a pharmacy-based intervention was designed for the AARC project. There are anumber of additional compelling reasons for the inclusion of a pharmacy-based intervention: the shortage of health expertise in addressing alcohol problems in rural communities suggests that engaging the help of pharmacists might be a worthwhile strategy; pharmacists are perceived by the community as acceptable, knowledgeable and credible sources of general health information; they are aware of alcohol issues because they regularly advise customers about interactions between alcohol and prescription drugs; and they have been shown to be effective intervention agents in reducing smoking rates.

Timeline of intervention implementation

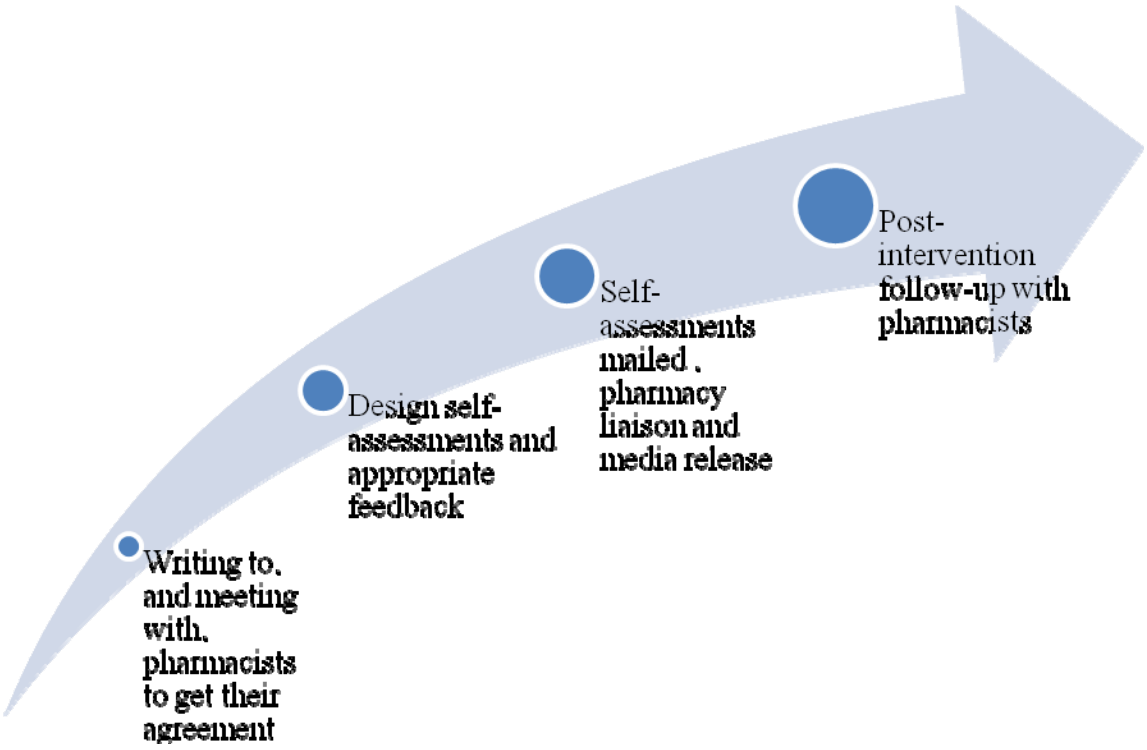
This intervention was implemented between September 2006 and January 2007.

Description of intervention components and implementation process

As summarised in Figure 2.9, this intervention comprised a number of sequential steps:

- Writing to, and meeting with, pharmacists in each community to obtain their agreement to participate in this phase of AARC;
- Designing the intervention, including the self-assessments and feedback;
- Mailing out the self-assessments to pharmacies and liaising with them through the early implementation stage, as they made the self-assessments available in their pharmacies, including development and distribution of a media release; and
- Post-intervention feedback, including the number of self-assessments completed.

Figure 2.9: The sequential steps for the pharmacy-based screening and brief intervention



The intervention

More specifically, the intervention involved chemists distributing the 10-item AUDIT questionnaire which is designed for use in clinical settings. It assesses a range of drinking dimensions (consumption, dependence and problems) and has a substantial body of evidence supporting its reliability and validity. Since screening and brief intervention have been shown to cost-effectively reduce alcohol consumption by approximately 20-30%, AUDIT was combined with brief advice into a draft self-assessment tool. Modelled on examples from diabetes and asthma, a pen-and-paper tool for self-assessing risk level of alcohol consumption, along with feedback specific to each level of risk and clear advice for those whose consumption is risky or high-risk, was made available on counters in pharmacies and placed in bags with other purchases. The feedback was the same as that used in the Drinkless kit.

Implementation procedure

This intervention was implemented in four steps.

- Writing to, and meeting with, pharmacists in each community to obtain their agreement to participate in this phase of AARC. This phase involved:
    - Writing a letter of introduction to all community-based pharmacists in the 10 AARC intervention communities about the idea and requesting a meeting at their pharmacy at a time suitable to the pharmacist; and
    - For the pharmacists who responded that they were willing to meet, a meeting time was arranged that coincided with a visit from the AARC team for another reason (eg. feedback of pre-test survey results or other data analysis). The purpose of the meeting was to talk about the idea of the intervention and gain their consent to participate.

- Designing the intervention, including the self-assessments and feedback. This phase involved:
    - Design of the self-assessment and feedback sheets. The self-assessment was the 10-item AUDIT questionnaire on the front page and feedback, depending on the respondent's score, was on the reverse page. The scores were colour coded with the appropriate feedback for ease of reference.
    - The self-assessment and feedback sheets were printed in pads of 100. They were sequentially numbered to allow easy calculation of the number that had been completed or distributed in each pharmacy.

- The mailing out of the assessments, pharmacy liaison and media release required the following steps:
  - A pad of 100 self-assessments was initially mailed to each of the 34 pharmacies in across all 10 experimental towns who indicated they were willing to participate. The cover letter indicated they could contact us for more self-assessments at any time and suggested that they distribute it in one of two ways: place in prescription bags; or place it on a counter for customers to either use it there or take a copy with them.
  - Twenty four of the participating 34 pharmacists (71%) indicated that they received the alcohol self-assessments. Self-assessments were re-sent to the 10 pharmacists who indicated that they had not received them.
  - In 19 (56%) pharmacies, the self-assessments were placed on a counter. In 11 (32%) pharmacies they were placed in prescription bags. In 2 (6%) pharmacies the self-assessments were handed to customers and in another 2 pharmacies they had not yet been distributed at the time of the follow-up call. Eleven pharmacies indicated that the self-assessments were distributed using more than one method.
  - The media release was written and issued in the week prior to the self-assessments being made available in pharmacies in order to raise awareness that they would be available for use in their local pharmacies. This was complemented by follow-up media interviews in person conducted by project staff where requested.

- Post-intervention feedback, including the number of self-assessments completed:
  - The number of pharmacies that reported having distributed all self-assessments at the follow-up point was the same as the number who were still using them (n=11; 32% for each).
  - Only two pharmacists indicated that customers had been prompted to talk to them about drinking: one reported speaking to two customers for about two minutes each; the other to 10 customers for about five minutes each.
  - Approximately four weeks after the self-assessments were distributed, all pharmacists were asked a series of follow-up questions about their use and perceptions of the self-assessment.

Costs

Table 2.12 provides an overview of the pharmacy-based screening and brief intervention costs. Total intervention costs are estimated at $2,959. As noted in the table, resources associated with planning the intervention in terms of liaising with pharmacists are valued in intervention 1 while the resources associated with developing and conducting the media release are valued in intervention 3. The key resource drivers in this intervention are the design costs (36% of total costs) and post-intervention feedback (39% of total costs). The cost associated with delivering the intervention is minimal reflecting the nature of the information dissemination.

Table 2.12: Cost of the pharmacy-based screening and brief intervention

Resource identification and measurement	Resource value $
Planning the intervention	
Time spent to arrange meetings with pharmacists (captured in intervention 1)	0
Opportunity cost of expert time spent meeting with pharmacists (captured in intervention 1)	0
Opportunity cost of pharmacists (captured in intervention 1)	0
Sub-total	*0*
Designing the intervention, including the self-assessments and feedback	
Time spent developing self report survey and feedback based on survey scores (8 hours x junior staff salary + 2 hours x senior staff salary)	477
Printing cost (pads of 100 at $580)	580
Sub-total	*1,057*
Mailing of self-assessment, intervention, pharmacy liaison and media release	
Mailing cost ($9.72 x 35 pharmacies)	340
Mailing cost for those that didn't receive first pack ($9.72 x 10 pharmacies)	97
Generating generic media release (4 hours x senior staff salary)	277
Media release (captured in intervention 3)	0
Time spent by pharmacists delivering intervention (2 minutes x pharmacist salary + 5 minutes x pharmacist salary)	21
Sub-total	*735*
Post-intervention feedback, including the number of self-assessments completed	
Cost of time and phone calls to ring pharmacists about intervention (10 minutes x admin staff salary x 35 pharmacists x $0.40c per phone call)	206
Time spent developing post test survey for pharmacist (2 hours x junior staff salary + 30 minutes x senior staff salary)	154
Time spent completing post test survey (20 minutes x 35 x pharmacists salary)	807
Sub-total	*1,167*
TOTAL	**2,959**

9. Aboriginal Community Controlled Health Service based screening and brief intervention

Background

The current body of literature regarding alcohol interventions for Aboriginal Australians currently presents something of a dilemma: on one hand, it is clear that alcohol results in a disproportionately high degree of harm for Indigenous Australians; and on the other hand, there is very little evidence from rigorous interventions trials as to which strategies are most cost-effective in reducing alcohol-related harm[77]. One response is to search the non-peer-review literature since 2000 (the end date of the most recent search of the grey literature) in an effort to identify new intervention evaluations[78]. A second possible response is to consider the applicability of evidence for SBI distilled from intervention trials in non-Indigenous settings to Indigenous-specific settings, in order to gauge whether such interventions might reasonably be disseminated to Indigenous Australians. A recent review examined both these possibilities and concluded that there is a clear opportunity to implement and rigorously evaluate the integration of SBI into Aboriginal Community Controlled Health Services (ACCHSs), using existing resources[77]. Consequently, the AARC project was used as an opportunity to examine the delivery of SBI into ACCHSs. An intervention comprising two strategies was implemented: training healthcare professionals in alcohol SBI delivery; and outreach support to implement and sustain alcohol SBI delivery. The specific aim of this intervention was to identify implementation issues in the routine delivery of SBI in ACCHSs[79,80].

Timeline of intervention implementation

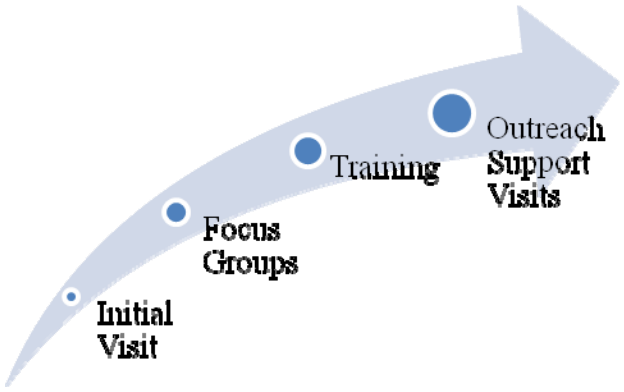
This intervention was implemented between May and October 2007.

Description of intervention components and implementation process

As summarised in Figure 2.10, this intervention comprised a number of sequential steps:

- An initial visit to the ACCHSs to obtain their agreement to participate in this phase of AARC;
- A focus group meeting in each ACCHS to identify their preferences for how the screening and brief intervention process might best be implemented in their services;
- The provision of training by the AARC research team in screening and brief intervention; and
- Ongoing outreach support visits to each ACCHS to help resolve issues.

Figure 2.10: The sequential steps for ACCHS-based screening and brief intervention



Initial visits

Initial visits were conducted to the sites to outline the project and examine their current processes. A central coordinator was in charge of this. The central coordinator spent a half day at each site for each visit. The first meeting was scheduled with the head of the AMS site (CEO). The second meeting involved with just the practise manager at one site and in another site it included the Drug and Alcohol Services team leader.

Focus groups

Focus group meetings were organised at each site by the coordinator. The purpose of the focus group meetings was to identify current practices, identify barriers to alcohol screening and brief intervention. These meetings were with health and management staff. At one site a total of six personnel of the AMS were involved: the CEO; a GP; a Registered Nurse; an Aboriginal Health Worker; and 2 administrative assistants. At the other site a total of eight personnel were involved: the Practice Manager; a Registered Nurse; 2 GPs; a Child Health Worker; the Drug and Alcohol team leader; and 2 Drug and Alcohol Workers. After the meetings, the co-ordinator transcribed the meeting discussions, analysed them and fed back results to both ACCHSs.

Training

Half a day training workshop in evidence based alcohol screening and brief intervention was conducted at each site, delivered by Drug and Alcohol experts.

Outreach support

The coordinator provided each site with two types of support.

- *Onsite support*. Coordinator visited one site seven times and the second site four times. Each visit was half day long. The first visit was before the training and the other visits were after the training. This involved the coordinator working with practise manager to integrate evidence based alcohol screening and BI into existing clinical processes (health assessments, care plans, general consultation) and working with them to resolve barriers to routine alcohol screening and BI. At the first site additional visits were required because the coordinator had to meet up with the Drug and Alcohol team leader whereas at the second site the onsite support required meeting up with only the practise manager.

- *Phone and email support* was provided by the co-ordinator who rang or emailed the practise manager on a fortnightly basis to check on progress and resolve any issues that had arisen.

Costs

Table 2.13 provides an overview of the Aboriginal Community Controlled Health Service based screening and brief intervention costs. Total intervention costs are estimated at $22,908. The majority of costs (71%) related to resources required to deliver the focus groups and training workshops. Another important cost driver was resource use associated with outreach support (15% of total costs). No consideration is given to measuring and valuing resource use by health professionals that implemented strategies as a consequence of the training session.

Table 2.13: Cost of the ACCHS-based screening and brief intervention

Resource identification and measurement	Resource value $
Initial preparation time and first meeting	
Time spent to arrange meetings with Aboriginal Community Controlled Health Care Services (ACCHS) (2 hours x admin staff salary x 2 towns)	132
Opportunity cost of expert time spent meeting with ACCHS (4 hours x 2 senior staff salary x 2 towns)	277
Opportunity cost of CEO + manager in initial meeting (4 hours x senior staff salary x 2 towns x 2 people)	277
Travel expenses (($290 travel; $130 meals and accommodation) x 2 people x 2 towns)	840
Sub-total	*1,525*
Follow-up meetings	
Time spent to arrange meetings with ACCHS (2 hours x admin staff salary x 2 towns)	132
Opportunity cost of expert time spent meeting with ACCHS (4 hours x 2 senior staff salary x 2 towns)	277
Opportunity cost of D&A services team leader in followup meeting (4 hours x 2 senior staff x 2 towns)	277
Travel expenses (($290 travel; $130 meals and accommodation) x 2 people x 2 towns)	840
Sub-total	*1,525*
Focus groups	
Time required to prepare materials for focus groups and coordinate with towns ((2 hour x senior staff salary + 2 hour x junior staff salary) x 2 towns)	446
Travel expenses (($290 travel; $130 meals and accommodation) x 2 people x 2 towns)	1,680
Opportunity cost of expert time (4 hours x $200 per hour x 2 towns)	1,600
Time spent by coordinator to arrange focus groups, convene focus group and transcribe and send results back to AMS (1 day x senior staff salary x 2 towns)	968
Opportunity cost of health and management time (4 hours per meeting x ((town 1 = 6 people (CEO, GP, RN, Aboriginal health worker and 2 admin.) + (town 2 = 8 people (practice manager, RN, 2GPs, child health worker,D&A team leader, 2 D&A workers))	3,149
Sub-total	*7,843*
Training	
Time required to prepare materials for focus groups and coordinate with towns ((2 hour x senior staff salary + 2 hour x junior staff salary) x 2 towns)	446
Travel expenses (($290 travel; $130 meals and accommodation) x 2 people x 2 towns)	1,680
Opportunity cost of expert time (6 hours x $200 per hour x 2 towns x 2 people)	4,800
Opportunity cost of health and management time ((town 1&2 = 8 people (2x GP, 2x RN, 2x Aboriginal health worker, 2 x admin) x 6 hours per meeting (2 junior staff salary and 2 senior staff))	1,338
Training materials, including provision of a Drinkless kit to all attendees ($30 per kit x 8 participants)	240
Sub-total	*8,504*
Outreach support	
Time spent by coordinator and D&A leader to provide onsite support (integrate evidence based alcohol screening and BI into existing clinical processes (health assessments, care plans, general consultation) and working with them to resolve barriers to routine alcohol screening and BI)) x 4 hours x 1 expert x 11 meetings x senior staff salary)	3,042
Time spent by coordinator providing phone and email support (15 minutes per call x 20 times x senior staff salary)	461
Cost of calls by coordinator ($0.40c per call x 20 calls)	8
Sub-total	*3,511*
TOTAL	**22,908**

10. Identifying and targeting high-risk weekends

Background

Chapter 2 showed that alcohol harms differed between the AARC communities, which highlights the ideal of tailoring interventions to the specific types of alcohol harm in each community that occur most commonly which, in turn, requires identifying when those harms occur. During the conduct of the AARC project, all local government areas in NSW were required to form a Liquor Accord group, comprising various community representatives, including alcohol licensees, local police, local councils, non-government organisations and road safety officers. These accords provided an opportunity to both readily engage multiple groups in a co-ordinated effort and increase the likelihood that the intervention would be sustained over time. Consequently this intervention identified, separately for each community, those weekends which, over the previous seven years, had proved to be problematic and targeted those weekends with a community-based intervention. Specifically, this intervention represents a community action approach that systematically involved coordinated effort between police, the local council, media and the alcohol licensees to reduce harm on high-risk weekends.

Timeline of intervention implementation

This intervention was implemented between June 2007 and December 2009.

Description of intervention components and implementation process

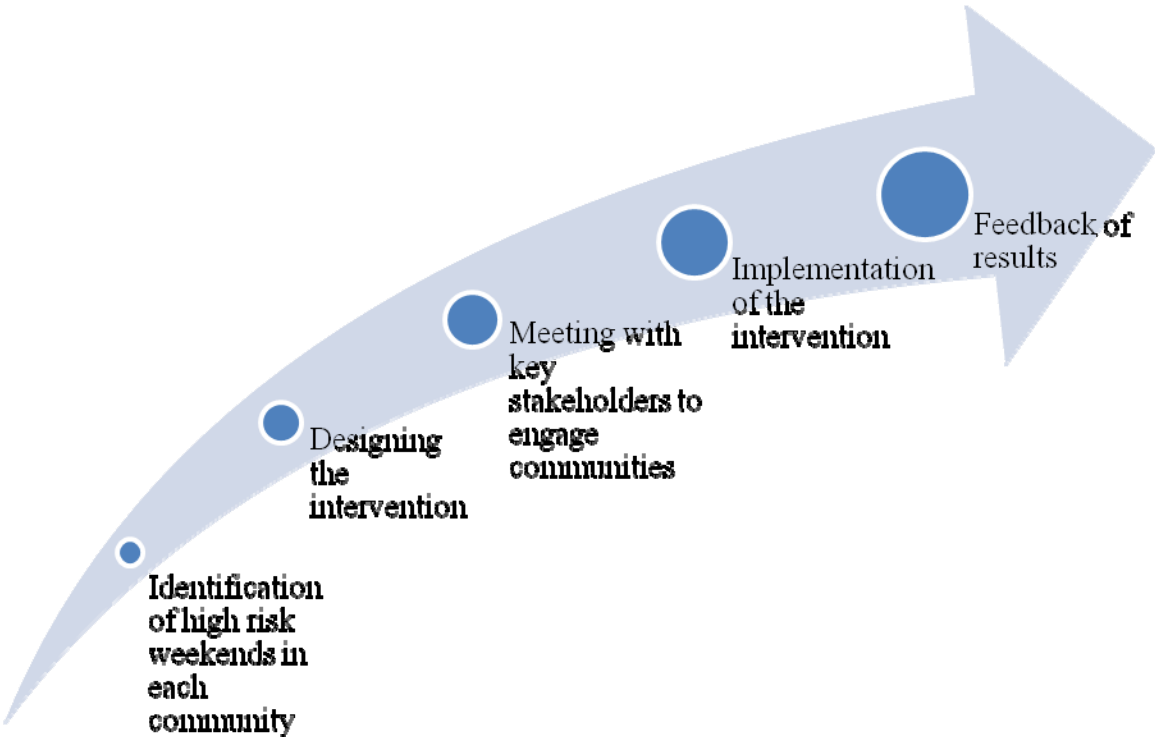
As summarised in Figure 2.11, this intervention comprised three main components:

- Identification of the weekends on which a disproportionately high number of alcohol-related crimes usually occur, based on alcohol-related crime data from the previous seven years.
- Meeting with key stakeholders in each community to present the data, identify if there are any obvious explanations for the weekends being atypically problematic for alcohol-related crime and gain their agreement to engage in an intervention aimed at reducing the number of alcohol-related crimes occurring on those problematic weekends.
- Designing and implementing a community-based intervention that may reduce the number of alcohol-related crimes on those weekends. This required a number of steps:
    - In the week leading up to each high risk weekend in each community, the Mayor wrote to the alcohol licensees advising that: the upcoming weekend was historically problematic; urging that they be especially vigilant regarding their responsible service of alcohol responsibilities;

advising that police would increase their visibility that weekend; asking them to ensure their security staff liaised closely with police on the Friday and Saturday nights to quickly resolve potentially dangerous situations;

- Media releases were distributed to alert the general community that the coming weekend was high risk for alcohol-related crime, as well as conduct any follow-up interviews requested;
- Police increased their visibility between 10pm and 2am on the Friday and Saturday nights, wherever possible and licensees agreed to instruct their security and bar staff to increase their level of vigilance; and
- Feedback on results in the week following from the high risk weekend, to indicate whether there had been any reduction in the number of alcohol-related crimes, relative to previous years. Results were fed back to key stakeholders (face to face meetings with the original community group or with the Liquor Accords) and to the community generally (through media releases to local newspapers and radio).

Figure 2.11 The sequential steps for the targeting of high-risk weekends intervention



Identification of high-risk weekends in each community

Two principles guided the selection of targeting high-risk weekends with the highest rates of alcohol-related assaults and malicious damage combined. First, it was necessary to ensure a sufficient number of weekends were selected to allow the process to be implemented regularly, but not so frequently that it would not be sustainable with limited resources available. Second, the weekends selected should reflect those that have recorded sustained problems over time (e.g. explained or unexplained), rather than those that have only been particularly problematic as a result of a small number of unusual incidents.

For each of the twenty communities, each year (2001-2007) was divided into 53 weekends and the number of alcohol-related assaults and malicious damage incidents were identified. The number of incidents on each weekend for 2001-2004 was then averaged, as was the number of incidents for 2005-2007. Weekends included in the top thirty percent for average numbers of incidents in both 2001-2004 and 2005-2007, were identified as 'high-risk', while the remaining were identified as 'low-risk'. By selecting weekends in the top thirty percent provided the potential to weight the selections in favour of the most recent years (2005-2007) in order to minimise the likelihood of targeting weekends which had already ceased to be problematic. Note this procedure resulted in a different number of high-risk weekends identified in each of the twenty towns, being a minimum of five and maximum of twelve.

Using a second technique that assumes there will be a minimum reduction of 50% of incidents on every weekend targeted by the intervention and a total reduction of at least 10% of incidents at baseline for practical significance, confirmed a similar number of weekends were chosen in each town as was demonstrated by choosing weekends included in the top thirty percent.

Meeting with key stakeholders to engage communities in this intervention

Weekends of interest were determined and the researchers explained the intervention at the Liquor Accord meetings or community coalition to seek their agreement to participate. The smallest of the experimental communities that did not have a well structured liquor accord group, devised the intervention with a broader community coalition group. It was stipulated that each liquor accord agreed to attempt all high-risk weekends identified in order to achieve a reduction of alcohol crime in their community.

Designing and implementing the intervention

Targeting high-risk weekends involved coordinated efforts between police, local council, media and alcohol licensees. In the week leading up to a historically problematic weekend, the Mayor wrote to all alcohol licensees alerting them that the coming weekend had previously been problematic regarding alcohol-related incidents and asking them to be especially vigilant in terms of their responsible service of alcohol obligations and to co-ordinate their security arrangements more closely with police. The letter also encouraged use of alternative transport, lockdowns, banning shots and doubles, refusing take-away sales and high-alcohol drinks after 10pm, and replacing glassware with plastic cups on high-risk days.

For the initial weekend targeted in each community, a 'hot-spot' map was sent with the letter, highlighting where the most incidents of assault and malicious damage had occurred in the previous year. High visibility policing (HVP) efforts were restricted to Friday and Saturday nights, both early in the evening and as pubs and hotels were likely to be closing. Such tasking on Sunday nights was discretionary by local area command. Police were only able to prioritise HVP if they were not called away to an emergency. Local media outlets contributed to the effort by raising awareness in the community, by producing a media release or broadcasting a radio announcement leading up to the weekend. Typically, the Mayor, AARC researchers, and a police representative would comment via media that in addition to heightened vigilance on the part of licensees and law enforcement, individuals need to take more responsibility for their own behaviour leading up to the weekend. Results of the weekend were obtained either directly through the police intelligence officer responsible for the community, and via NSW Police Force. Preliminary findings were reported back to the community via media in addition to the liquor accord or community coalition groups for discussion.

Costs

Table 2.14 provides an overview of the identifying and targeting high risk weekends intervention costs. Total intervention costs are estimated at $78,462. The majority of costs (96%) related to police resources required to deliver the intervention. Resource use associated with intervention planning and liaison with boards is valued as part of original stakeholder meetings in intervention 1 and has not been replicated here. Further, as noted in the table, costs of developing and conducting the media release is valued as part of intervention 3.

Table 2.14: Cost of identifying and targeting high-risk weekends

Resource identification and measurement	Resource value $
Identification of the weekends	
Time spent to collect data and arrange meetings (captured in intervention 1)	0
Opportunity cost of expert time meeting (captured in intervention 1)	0
Opportunity cost of stakeholders (captured in intervention 1)	0
Sub-total	*0*
Mayor costs	
Time spent to generate generic letter, identify clubs and pubs and other licensees (4 hours x junior staff salary)	169
Adapt template for each licensee (5 minutes x admin staff salary x 380 licenses)	1,045
Material for mailing ((stamp, printing and envelope ($0.69) x 380 licenses)	262
Time spent to generate generic hot spot map (2 hours x junior staff salary x 10 towns)	847
Adapt map for each town (10 minutes x junior staff salary x 114 weekends)	805
Hot spot map dissemination - additional printing of hot spot map (cost of envelope and stamp ($0.41) x 114 weekends)	32
Sub-total	*3,161*
Media	
Generating generic media release (captured in intervention 3)	0
Tailoring media release to each town (captured in intervention 3)	0
Media release (captured in intervention 3)	0
Sub-total	*0*
Police time	
Police time filling out forms (1 hour x constable salary x 115 weekends)	3,805
Police visibility - extra vigilance, more time patrolling (from pre-designed timesheet)	71,496
Sub-total	*75,301*
TOTAL	**78,462**

11. Good Sports

Background

The Australian Drug Foundation (ADF) were in the process of implementing the Good Sports program in NSW when AARC commenced. Our negotiations with the Good Sports team indicated that they had plans to implement Good Sports in 6 of the 10 AARC intervention communities. Consequently, we agreed to provide AARC funding to Good Sports to ensure the additional 4 communities were included in the initial implementation of Good Sports.

Timeline of intervention implementation

This intervention was implemented between March 2007 and December 2009.

Description of intervention components and implementation process

Although a full description of the process of implementing the Good Sports program specifically in the AARC communities has not been able to be provided, nor a detailed examination of the costs of Good Sports, the intervention is costed as part of the AARC project because there was at least some Good Sports activity in the majority of AARC communities.

Costs

The cost to AARC to ensure all 10 intervention communities had the opportunity to be involved in the Good Sports program was $26,400.00 for four communities, which equates to an estimated cost of $6,600.00 per community (or $66,000.00) to implement it in all 10 AARC intervention communities.

12. Hospital accident and emergency based screening and brief intervention

Background

Emergency departments (EDs) have great potential to substantially contribute to reducing alcohol-related harm because they are accessed by a large number of problem drinkers: an average of 16% of ED patients in Western countries drinking at harmful levels[81]. Furthermore, intervening with patients at a time when they are seeking help for a health problem means their motivation to change their drinking behaviour is likely to be increased, especially in patients who can see a link between their alcohol use and their ED presentation[82,83]. Recent meta-analyses of outcomes of ED-based alcohol interventions showed good evidence for the efficacy of alcohol interventions in reducing alcohol-related injuries[84], and some evidence for their cost-effectiveness[85].

Despite this potential, attempts to incorporate alcohol interventions into routine ED care have been hampered by the substantial financial, time and staff attitudinal constraints associated with providing patients with face-to-face personalised feedback, motivational interviewing and advice about their drinking[86-88]. The alternative of employing an alcohol health worker is similarly beyond the financial resources typically available in EDs[89]. Written advice has also been evaluated in the ED: while computerised screening followed by printed personalised feedback and advice reduced alcohol consumption compared to usual care[90], screening and generic written advice was no more effective in reducing alcohol consumption than screening alone[91]. These results suggest personalisation of written

advice might be a critical component of an effective intervention, which is consistent with the enhanced impact of tailoring in changing health behaviours generally, compared to generic interventions[92].

Although promising, the costs of computerised screening and feedback (purchase and maintenance of computers, printers and screening software) and logistics (ensuring privacy, security of equipment and access to technical skills to maintain computers) are still likely to be prohibitive in most EDs[93]. A less costly and more feasible alternative is to mail written personalised feedback to patients after brief screening in the ED. Mailed written personalised feedback has been associated with reduced alcohol consumption in problem drinking college students[93-98], employees[99], and members of the general population[100-102], but it has not been evaluated in ED patients. Consequently, this AARC intervention comprised mailed personalised feedback for problem drinking ED patients.

Timeline of intervention implementation

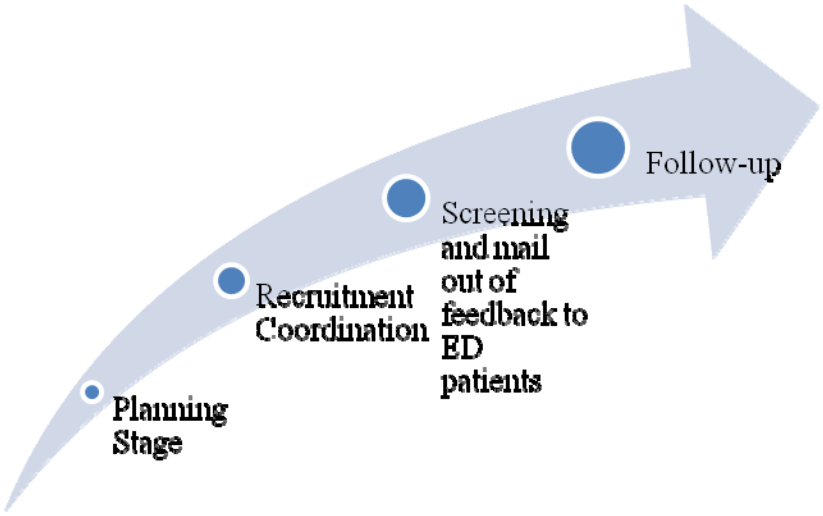
This intervention was implemented between March 2009 and December 2009.

Description of intervention components and implementation process

As summarised in Figure 2.12, this intervention comprised three main components:

- Planning stage;
- Recruitment co-ordination;
- Screening and mail out of feedback to ED patients; and
- Follow-up.

Figure 2.12 The sequential steps for the ED-based SBI intervention



Planning stage

On the basis of a previous trial of an ED-based SBI[89], it was assumed that a 30% difference between intervention and control groups in the number of standard drinks consumed per week would be observed at post-test. With a 0.7 correlation between drinks per week at baseline and 6 week follow-up assumed, 103 participants in each group would provide 80% power to detect this difference with an alpha of 5%. Allowing for a 30% loss to follow-up, it was determined that a total sample of 294 at-risk drinkers would be required to be randomised to either the intervention or control group.

The baseline screening questionnaire contained the Alcohol Use Disorders Identification Test (AUDIT) with modifications made to items 1, 2 and 9. These modifications did not alter the scoring of the AUDIT and, as is standard, a total score of 8 or more was used as the cut-off for identifying risky drinkers. The screener also included sex-specific questions regarding the frequency of drinking above the threshold for risk of short-term harm, as defined by the Australian Alcohol Guidelines that were current at the time this study was planned, as well as items regarding participant demographics, previous access of alcohol treatment and the involvement of alcohol in their current ED presentation (referred to as index ED presentation). More specifically, an alcohol-involved index ED presentation was one in which the patient either reported alcohol consumption in the 6 hours prior to the onset of their condition or reported that they perceived alcohol to be a contributing factor in the condition for which they presented.

The follow-up survey included the modified AUDIT used at baseline, with the two parts of Item 9 further modified to create open ended questions ascertaining the number of injuries (to oneself and to someone else respectively) sustained as a result of the participant's drinking. The AUDIT timeframe was modified to avoid overlap of the pre- and post-test periods: specifically, questions referred to the 6 weeks prior to the survey, rather than usual 12 months. As a result, total scores on the AUDIT were not used as an outcome, as they could not be meaningfully interpreted.

Also included in the follow-up survey were the sex-specific questions corresponding to the Australian Alcohol Guidelines, as a measure of the frequency of heavy drinking, and items regarding participants' experience of ED presentations and hospital admissions (alcohol-related and generally). Questions also asked whether participants received information in the mail about their alcohol consumption and, if so, whether they read it, found it useful and thought ED patients should be sent such information on an ongoing basis. The order of possible responses on these items was reversed in half the questionnaires so as to avoid potential order effects.

The main outcome variables of interest were:

- Quantity/frequency of alcohol consumption, derived by multiplying responses on the first two items of the AUDIT. This was measured in Australian standard drinks per week, where a standard drink is any drink containing 10 grams of alcohol.
- The frequency of heavy drinking. This was determined from the sex-specific questions, measured as the number of days out of the last 30 in which the Australian Alcohol Guidelines for risk of short-term harm were exceeded (5 or more standard drinks for females, 7 or more standard drinks for males).

The secondary outcome variable of interest was whether participants had experienced an alcohol-related injury. This was determined by item 9 of the AUDIT, which was split into two questions. Specifically, the first of these two questions was used: 'have you ever been injured as a result of your drinking?' The question regarding the participant's number of presentations to any ED over the follow-up period was used to measure repeat ED presentations. For each ED presentation reported, subsequent questions determined whether the participant consumed alcohol in the 6 hours prior to the onset of the condition, and whether the

participant perceived alcohol to be a contributing factor in the condition for which they presented. An alcohol-involved presentation was considered one with a positive response on either of these two questions.

The intervention consisted of personalised normative feedback mailed to participants in the form of a letter from the AARC project team. Normative feedback, in which an individual's drinking is reported in the context of data from the general population, was chosen because the target population consists of individuals who are not seeking treatment for their drinking and are not necessarily motivated to change. The intervention was modelled on written feedback mailed previously in successful trials[100,101].

Recruitment co-ordination

Participants were patients of five EDs in rural NSW, where the EDs were selected on the basis of their participation in the experimental arm of the AARC project and their submission of electronic medical records to a central database. Screening interviews were conducted with patients aged 14 years and older who presented to a participating ED between March 5th and December 18th 2009 (inclusive). Those who reported risky alcohol use, had a mailing address in Australia and were not currently incarcerated were eligible to participate in the randomised controlled trial (RCT) of the intervention.

Screening and mail out of feedback to ED patients

Interviews were initially conducted over the phone following an invitation from an ED staff member to participate. As this approach resulted in low recruitment, 95% of screening interviews were conducted in-person by trained interviewers. Participants identified as risky drinkers through the screening interview were invited to participate in follow-up surveys. An incentive for participating in follow-up surveys was not offered due to ethics committee requirements. Consent forms were completed by those who agreed and contact information collected. In order to maintain blinding of participants, the study was described as repeated surveys about alcohol consumption in ED patients and no information about experimental conditions or the mailed feedback was provided during the invitation to participate. Follow-up questions regarding the participant's receipt, and opinion, of the mailed feedback were worded to imply that all participants were sent the feedback, so as not to reveal the presence of experimental conditions during follow-up surveys.

Consenting participants were randomly assigned to the intervention or control group on the basis of a blocked randomisation sequence, generated using Stata. Blocked randomisation was used to maintain approximately equal group sizes at all times, and block sizes varied between two, four and six to minimise the predictability of the sequence. Randomisation was stratified by ED as well as gender because of evidence for differential effectiveness of mailed feedback for men and women. Participants in the intervention group were mailed personalised feedback a mean of 7 days after baseline screening, while the control group received no further contact from the research team until the follow-up interview.

Follow-up

Follow-up interviews occurred 6 weeks after baseline screening. Interviewers were blinded to the group to which participants were allocated until participants responded to questions regarding their receipt of the mailed feedback. These questions were administered after the main outcome variables were assessed. For participants who were unable to be contacted by phone, the survey was emailed or mailed (with a stamped self-addressed envelope).

Costs

Table 2.15 provides an overview of the hospital accident and emergency based screening and brief intervention costs. Total intervention costs are estimated at $24,151. The majority of costs (70%) related to screening patients. It is important to note that the intervention was carried out by an agency within the town itself instead of a centralised coordinating agency. However, to be consistent with the opportunity cost principle market rates are adopted in valuing the time of ED staff to screen patients. Another important cost driver was resource use associated with planning and recruitment co-ordination (22% of total costs). As noted in the table, costs of developing and conducting the media release are valued as part of intervention 3.

Table 2.15: Cost of the ED-based screening and brief intervention

Resource identification and measurement	Resource value $
Planning and recruitment co-ordination	
Time spent to identify hospital EDs in each community and draft letters (2 days x admin staff salary)	462
Expert expenses to meet with Emergency Departments (((($290 travel; $130 meals and accommodation) x 5 towns x 2 visits	4,200
Opportunity cost of expert time (30 minute x senior staff salary x 2 visits x 5 towns)	346
Opportunity cost of ED coordinator time (30 minute senior staff salary x 2 visits x 5 towns)	346
Sub-total	*5,353*
Screening	
Time spent by coordinator liasing with ED staff (4 hours x junior staff salary x 2 visits x 5 towns)	1,320
Time required to design screening questionaire (3 hour x senior staff salary + 6 hour x junior staff salary)	462
Expert expenses to meet with Emergency Departments (((($290 travel; $130 meals and accommodation) x 5 towns x 2 visits)	4,200
Opportunity cost of expert time (4 hours x senior staff salary x 4 visits per town x 5 towns)	5,531
Time spent recruiting/screening patients (20 minutes x junior staff salary x ,1416 patients)	4,999
Participant time spent filling out screening instrument (no costs given it was opportunistic)	0
Materials (1 page x $0.28c per page x 1,416 copies)	396
Sub-total	*16,908*
Mailed personalised feedback	
Time spent by coordinator generating generic feedback letter (4 hours x senior staff salary)	277
Time spent by coordinator generating mailed feedback (8 minutes x senior staff salary x 150 letters)	1,383
Materials (2 pages x $0.28c per page + stamp and envelope ($0.41c) x 150)	146
Cost of phone calls to follow-up with participants ($0.55c per call x 150 people)	85
Sub-total	*1,890*
Media release	
Generating generic media release (captured in intervention 3)	0
Tailoring media release to each town (captured in intervention 3)	0
Media release (captured in intervention 3)	0
Sub-total	*0*
TOTAL	**24,151**

13. Web-based screening and brief intervention

Background

There is some evidence for the cost-effectiveness of internet-based interventions. In addition to this evidence, there are other reasons to consider that internet-based interventions may be important in rural

communities: it provides immediate access to best-evidence interventions in communities were formal health services are relatively poorly resourced; it potentially provides a more confidential avenue to care for people living in small communities; and services can be provided in a cost-effective manner given travel costs and clinic space are not required.

Timeline of intervention implementation

This intervention was implemented between January 2006 and December 2009. Although access was maintained through-out the study period, the website was not promoted or updated since its use in the first two months was very low, despite advertising its availability via local media releases and as part of the community feedback process.

Description of intervention components and implementation process

This intervention comprised the 10 item AUDIOT questionnaire and, based on respondents answers, tailored, personalised feedback.

Costs

Table 2.16 provides an overview of the Web-based screening and brief intervention costs. Total intervention costs are estimated at $3.953. The key cost drivers are developing the website (67% of total costs) and design and planning of the website (33% of total costs). No consideration is given to measuring and valuing resource use by individuals that spent time on the website.

Table 2.16: Cost of web-based screening and brief intervention

Resource identification and measurement	Resource value $
Design and planning	
Time spent to develop materials (20 hours x junior staff salary + 5 hours x senior staff salary)	1,193
Sub-total	*1,193*
Developing website	
Cost of developing website	2,400
Sub-total	*2,400*
TOTAL	**3,593**

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