



**Know thyself:
does BI influence GPs' prescribing for alcohol
dependence?**

**A/Prof Anthony Shakeshaft, Hector Navarro, Dennis Petrie,
Chris Doran**

Medicine

National Drug and Alcohol Research Centre



Aims

- Evaluate the cost-effectiveness of tailored, postal feedback on GPs' prescribing of acamprosate and naltrexone for alcohol dependence, relative to current practice
- Examine the impact of any change in prescribing behaviour on hospitalisations for alcohol dependence



Background

- Some evidence that SBI is effective for dependent drinkers (Guth et al, 2008; Field & Caetano 2010; Cobain et al, 2011)
- But generally agreed highly dependent drinkers likely to require detox (sedative meds) and relapse prevention (pharmacotherapy)
- Which pharmacotherapy?
 - Only 5 available world wide
 - Evidence of effectiveness is mixed
 - Different meds have different side-effects for different patients
 - In Oz, cost of acamprosate and naltrexone subsidised for patients (\$12.70 for 3 months supply for acamprosate and 1 month supply of naltrexone, cf \$150 govt)
- Why GPs?
 - $\leq 18\%$ of dependent drinkers seek specialist care (Proudfoot 2002)
 - Addiction specialists rare outside urban areas (Druss 2006; McAvoy 2008)



Background

- Use of pharmacotherapies in Oz is low:
 - 70-80% of dependent drinkers visit a GP (Proudfoot 2002)
 - only 3% are prescribed a pharmacotherapy (Doran et al, 2003)
- Mixed RCT results for strategies to increase GP prescribing of non-alcohol meds and no evidence for alcohol meds
- Increasing rates of alcohol abstinence could demand for hospitalisations for (Poikolainen et al, 2011)
- Will tailored feedback increase prescribing and reduce hospitalisations?



Alcohol Action in Rural Communities - AARC

Randomised controlled trial to reduce alcohol-related harm at the community-level

20 communities in regional NSW, Australia (10 experimental)

- Selection criteria:
 - Mean population 15,000; at least 100km from a regional / metro centre
- 10 matched pairs:
 - population size; age/gender distribution; % Indigenous
- One of each pair randomly allocated to experimental condition
- GPs: 115 in experimental and 160 in control communities

AARC

- Measures
 - Routinely collected: crimes, traffic crashes, inpatient hospitalisations
 - Self-report (2005 survey & 2010):
 - * Consumption (AUDIT) & perceptions of harm;
 - * Alcohol dependence = AUDIT score \geq 20
 - Medicare Australia (scripts filled):
 - * 1 October 2000 to 31 December 2004; 1 October 2005 to 31 December 2009
 - * Aggregated by quarters; experimental and control comms only
- Interventions (N=13)
 - Engagement with communities
 - Feedback of data/results to key stakeholders
 - Media advocacy (feedback to communities)
 - High-school interactive session on alcohol harms
 - SBI: GPs, pharmacies, hospital EDs, AMSs, web-based
 - Good Sports in clubs
 - GP feedback on prescribing
 - Workplace policy & training
 - Targeting high-risk weekends

Method – GP prescribing

- Pre-intervention survey:
 - 3,017 responses; 40% response rate
- Dependence and prescribing characteristics

Characteristic	Experimental	Control
# dependent drinkers	2,772 (3.5%)	2,757 (3.6%)
% male	71	75
# GPs	115	160
# dependent drinkers for every 1 GP	20	17
Rate of prescribing/dependent drinker/quarter		
Acamprosate	0.01	0.02
Naltrexone	0.01	0.01
Rate of prescribing/10 GPs/quarter		
Acamprosate	2.31	2.77
Naltrexone	1.97	1.21
Rate hosp admits for alcohol dep/10k pop/quarter	1.30	2.12



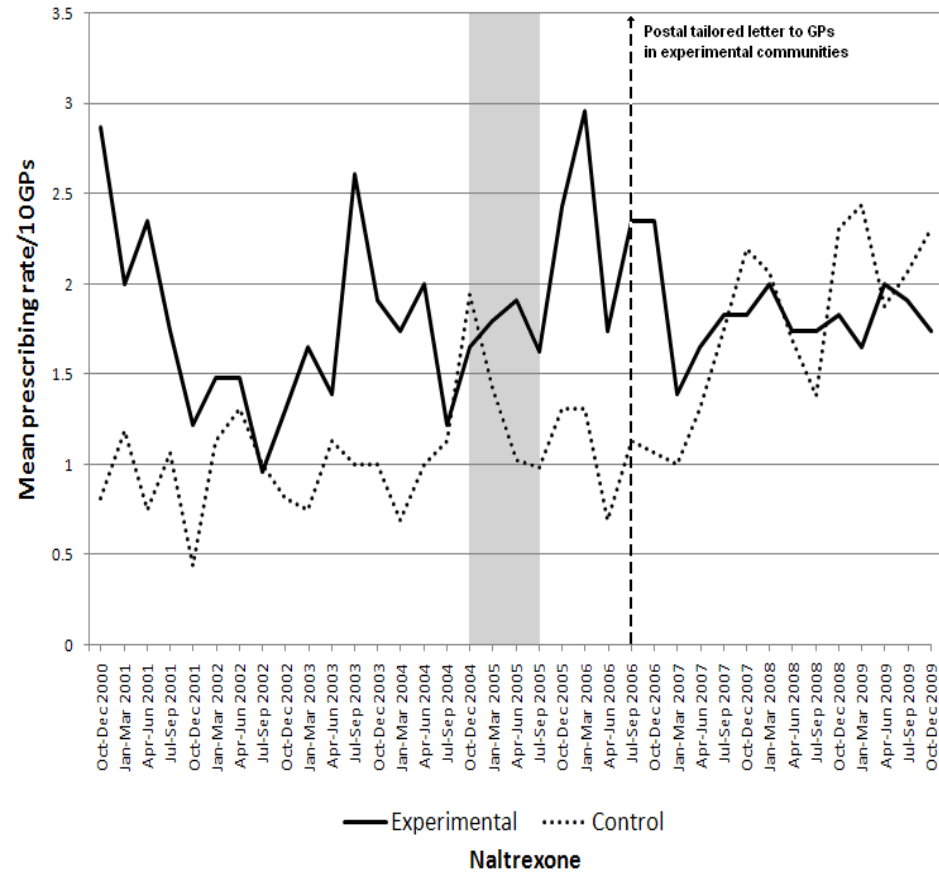
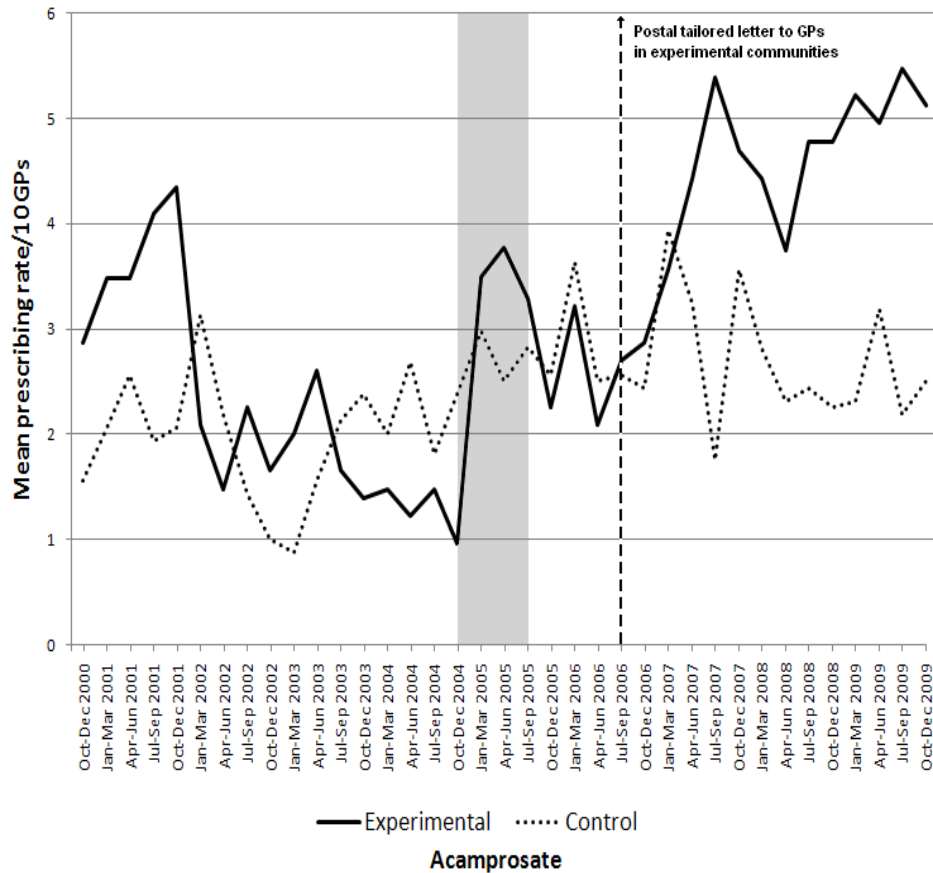
Method – GP prescribing

- Intervention
 - Letter from researchers to each GP
 - Information on estimated number dependent drinkers in their community and the % likely to have filled a script for either acamprosate or naltrexone
 - Information on effectiveness of acamprosate and naltrexone, with references to relevant studies / reviews
 - Recommendation that GPs increase their rates of prescribing either acamprosate *or* naltrexone
 - Mailed early Sept 2006



Results - prescribing

- Mean prescribing rates per 10 GPs



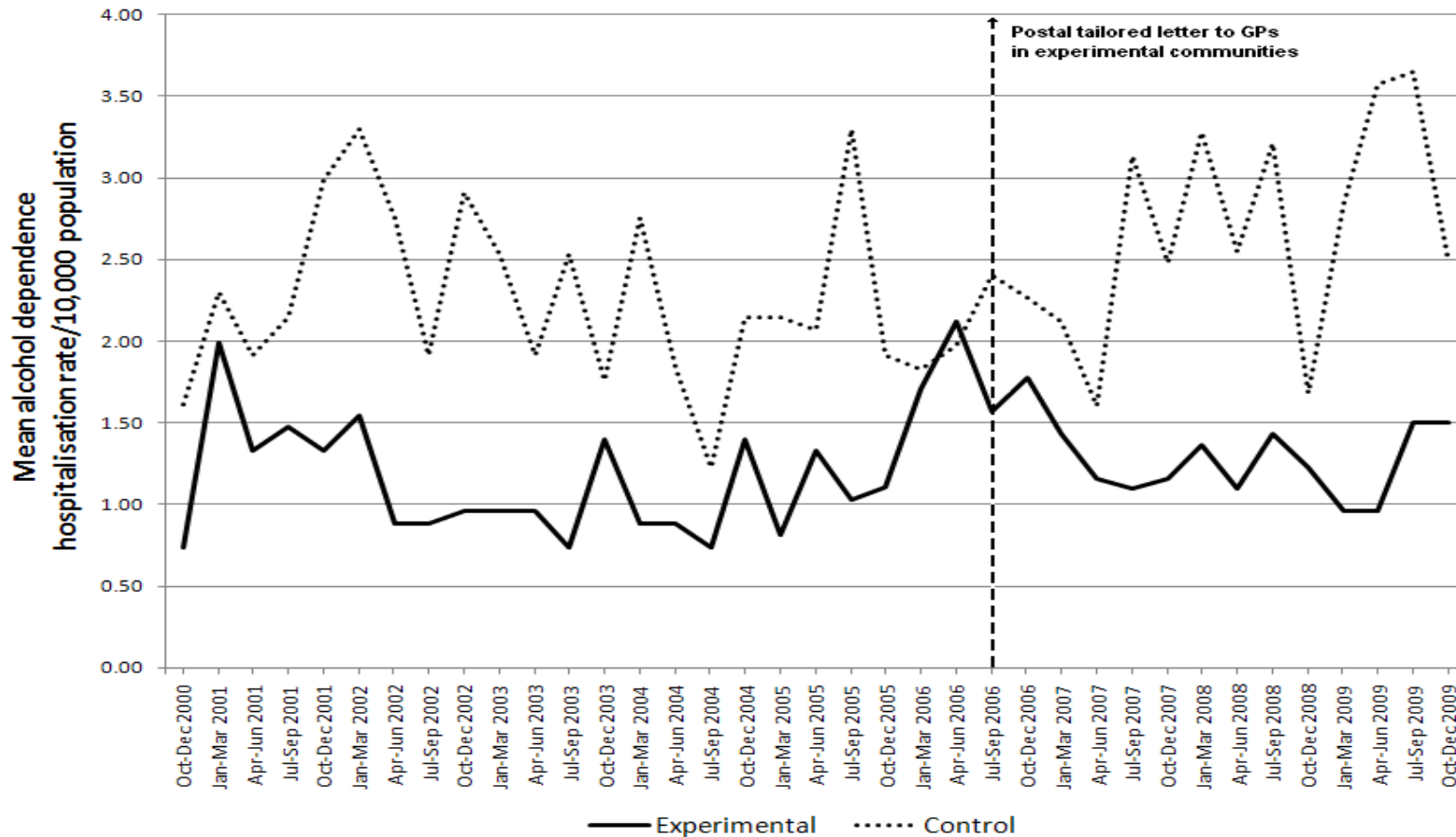
Results - prescribing

- Compared to the controls, mean prescribing rate for acamprosate significantly increased immediately after the intervention (1.57%; $p < 0.01$), as did the trend line (0.24%; $p < 0.001$)
- Compared to the controls, mean prescribing rate for naltrexone significantly decreased immediately after the intervention (0.79%; $p < 0.01$), as did the trend line (0.12%; $p < 0.001$)



Results - hospitalisations

- Mean alcohol dependence hospitalisation rates per 10,000 pop



Results - hospitalisations

- Compared to the controls, mean hospitalisation rate did not change immediately after the intervention in the experimental communities (-0.02; $p > 0.05$)
- Compared to the controls, mean hospitalisation rate trends in the experimental communities was significantly less (0.07%; $p < 0.05$).



Conclusions

- Relative to control GPs, experimental GPs prescribed more acamprosate and less naltrexone after the intervention, both on average and over time (trend). Sensitivity analyses did not change these results
- The observed quarterly hospitalisation rate **trend** was statistically significantly less in the experimental communities, compared to the controls (no effect on average, pre vs post)
- Increased prescribing increased costs by an estimated \$3,243 per quarter for all 10 experimental communities (*sensitivity - robust*)
- Decreased hospitalisations achieved an estimated cost saving of \$12,750 per annum for all 10 experimental communities (*sensitivity - only in 60% of hospitalisations*)

Conclusions

Cost effectiveness of averted hospitalisations in experimental vs control communities - sensitivity analysis

