Implementation of an intervention to enhance police surveillance of alcohol-related harm: a stepped wedge trial

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Background

- Alcohol-related violence an increasing problem

- Limited compliance by licensed premises with licensing laws

- Police enforcement of liquor licensing laws effective in reducing alcohol-related crime

- Lack of systematic enforcement by police

- Intelligence-led policing a means of enhancing enforcement:

  - Utilising intelligence information to systematically identify to high-risk locations, offenders and types of crime

  - Proactive targeted response to high risk locations, types of crime

- Supported by guidelines and policy

Background

- Limitations of existing practice:

  - Alcohol not a policy priority

  - Inadequate police information systems:

    - 'alcohol related', intoxication, last place of alcohol consumption, identification of licensed premises

    - Limited accessibility of data for police tasking and deployment

  - Inadequate skills

  - Lack of organisational support

Study goal and aims

Goal: Enhancement of policing capability

Aims:

1. To determine the effectiveness of an intervention in facilitating police recording of alcohol characteristics of people involved in incidents of assault

2. Based on such information, to describe the variability of such characteristics

Design, setting and participants

- Whole of state of New South Wales, Australia

- Stepped wedge, pragmatic implementation trial (approx. 4 years)

- Intervention (approx. 12 months) implemented sequentially in 3 convenience-based geographic areas

  - Area 1: regional/rural/remote

  - Area 2: regional/rural

  - Area 3: urban/metropolitan

- Police – all operational police (approx. 12,000)

- Persons of interest/victims of police-attended assaults

Implementation Intervention

- Framework and Evidence

  - Diffusion of Innovations
  - Organisational change
  - Clinical practice change

- Two broad elements:

  a) Design of the innovation/intervention
  - Simple, align to values/objectives, systems of organisation

  b) Explicit implementation strategies
  - Change in practice
  - Sustainability of change

Implementation Intervention

a) **Systematic collection/recording by police of:**

1. *alcohol consumption prior to the incident*

If Yes, incident "flagged" as alcohol-related…

2. *intoxication status* ('Not', 'Slightly', 'Moderately', 'Well' or 'Seriously' intoxicated)

3. *last location of alcohol consumption* (licensed premises, home/private, non-licensed restaurant/cafe, public place, special event)

If the last place was a licensed premises…

4. *the name and address of the premises*

Implementation Intervention

b) *Implementation strategies*

- *Leadership support*: Commissioner/Asst. Commissioner

- *Enhancement of police systems*: Modification of state-wide incident database (mandatory), standard operating procedures

- *Training*: Mandatory for all operational police

- *Monitoring and feedback*: Monthly feedback to commands, inclusion in performance monitoring systems

- *Communication and promotion*: building the case re rationale, progress, benefits, promotional strategies

- *Implementation support*: staff in police facilities

Data collection and measures

Data collection

- State-wide incident database

  – Approx. 150,000 incidents of assault; 265,000 people

Aim 1: Police recording of information

- Mean monthly % of persons for whom police recorded:

- alcohol consumption, intoxication, location of last drink, identity of premises

Aim 2: Alcohol-related characteristics of incidents/people:

- Mean monthly % incidents "flagged" as alcohol related x Area

- Mean monthly % people: consumed alcohol, intoxicated, consumption locations (premises, home, public place) x Area

- Variability of intoxication and assaults by place of consumption, premises

Results- police recording of information

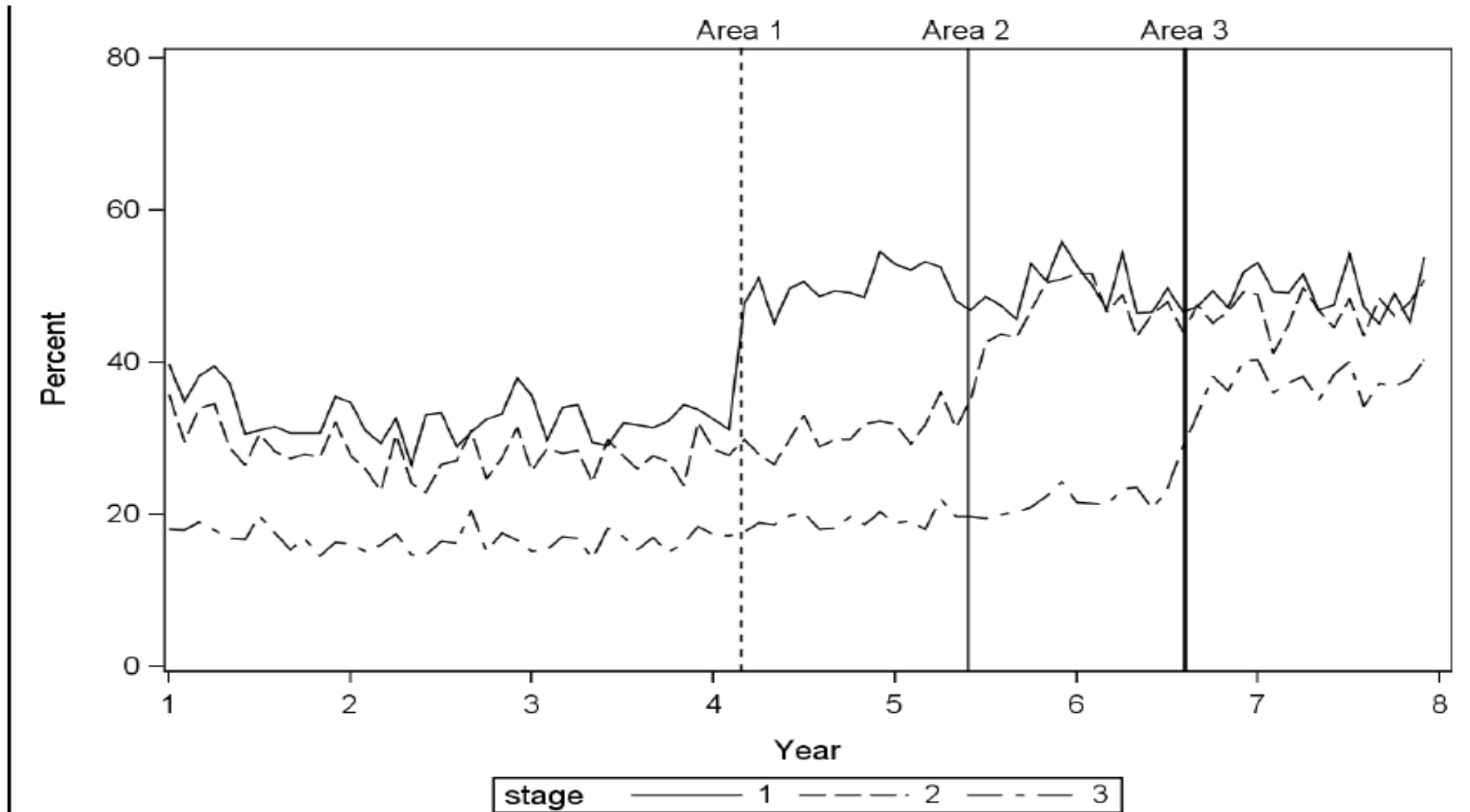| Information item	Area	% of people: 1 month post intervention %	Mean monthly % of people: from 2nd month to end of study
Prior alcohol consumption	1	84%	89% (SD=2.2%)
	2	79%	89% (SD=3.0%)
	3	85%	91% (SD=1.2%)
Intoxication level	1	100%	>99% (SD=0.08%)
	2	100%	>99% (SD=0.07%)
	3	100%	>99% (SD=0.03%)
Location of alcohol consumption	1	86%	89% (SD=2.0%)
	2	84%	89% (SD=2.4%)
	3	84%	85% (SD=1.9%)
Licensed premises name and address	1	96%	98% (SD=1.8%)
	2	98%	98% (SD=1.7%)
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Results- assaults 'flagged' as 'alcohol-related'

Figure 1: Proportion of assault incidents flagged as alcohol-related, pre and post intervention implementation, by area

Results - assaults 'flagged' as alcohol-related

Area	Pre-intervention implementation mean mthly % (SD)	Post-intervention implementation Mean monthly % (SD)	Adjusted change in mean proportion of assault recorded as 'alcohol-related'- pre to post Mean mthly % (SD)	p-value
1	33.2% (3.8)	49.7% (2.9)	17.9%	<0.0001
2	29.0% (3.1)	47.0% (2.9)	16.4%	<0.0001
3	18.5% (2.7)	37.5% (2.2)	15.0%	<0.0001
All	26.0% (7.7)	44.5% (5.8)	18.5%	<0.0001

Results- variability of alcohol characteristics of people

Alcohol characteristic	Area	Mean monthly % at completion of follow-up
Intoxicated	1	71% (SD:2.0%)
	2	70% (SD:1.7%)
	3	69% (SD:1.3%)
Consumed alcohol on a licensed premises	1	39% (SD:4.4%)
	2	42% (SD:3.8%)
	3	54% (SD:4.3%)
Consumed alcohol in public place	1	4% (SD:1.1%)
	2	5% (SD:1.6%)
	3	5% (SD:1.0%)
Consumed alcohol in a private residence/home	1	55% (SD:3.9%)
	2	50% (SD:3.1%)
	3	39% (SD:3.7%)

Results- variability of alcohol characteristics of people involved in assault

Alcohol characteristic	Area	Mean monthly % at completion of follow-up	p-value (between areas)
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Results- location of alcohol consumption - intoxicated people

Last place of consumption	Intoxicated people Area 1 (N=32,832)	Intoxicated people Area 2 (N=17,374)	Intoxicated people Area 3 (N=16,297)
Licensed premises	39% (SD: 4.8%)	43% (SD: 4.3%)	56% (SD: 4.8%)
Private residence/ home	55% (SD: 4.2%)	49% (SD: 3.6%)	37% (SD: 4.3%)
Public place	4% (SD: 1.4%)	6% (SD: 1.9%)	5% (SD: 1.1%)
Other	2% (SD: 1.6%)	2% (SD: 1.5%)	2% (SD: 0.7%)
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	100%	100%	100%

- Across all licensed premises a median of 2- 3 intoxicated people involved in an assault in a year

- 20% of premises associated with 62% of assault incidents

- In a single licensed premises, 108 intoxicated people involved in an assault in a single year (Area 3).

Conclusions

- Implementation intervention effective in enhancing availability of alcohol-related intelligence information

- Effect achieved across all 4 information items, replicated on 2 occasions and sustained

- Alcohol involvement demonstrated to vary according to geography, location of consumption, and individual premises

- Provides capacity for police to target and tailor enforcement of liquor licensing laws to high risk locations

Conclusions

- Harm reduction benefit dependent on nature of police response
  - Information provision – individual and group
  - Education – individual and group
  - Surveillance and feedback (inspections)
  - Infringement notices
  - Temporary closures
  - Formal court action

- Intervention - educational feedback to licensees based on newly recorded information
  - Randomised controlled trial – 15% reduction in incidents associated with licensed premises that received the intervention