



Predicting area-level trends for youth alcohol-related assaults and hospital admissions in Victoria: Implications for Communities That Care in Australia

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Collaborators

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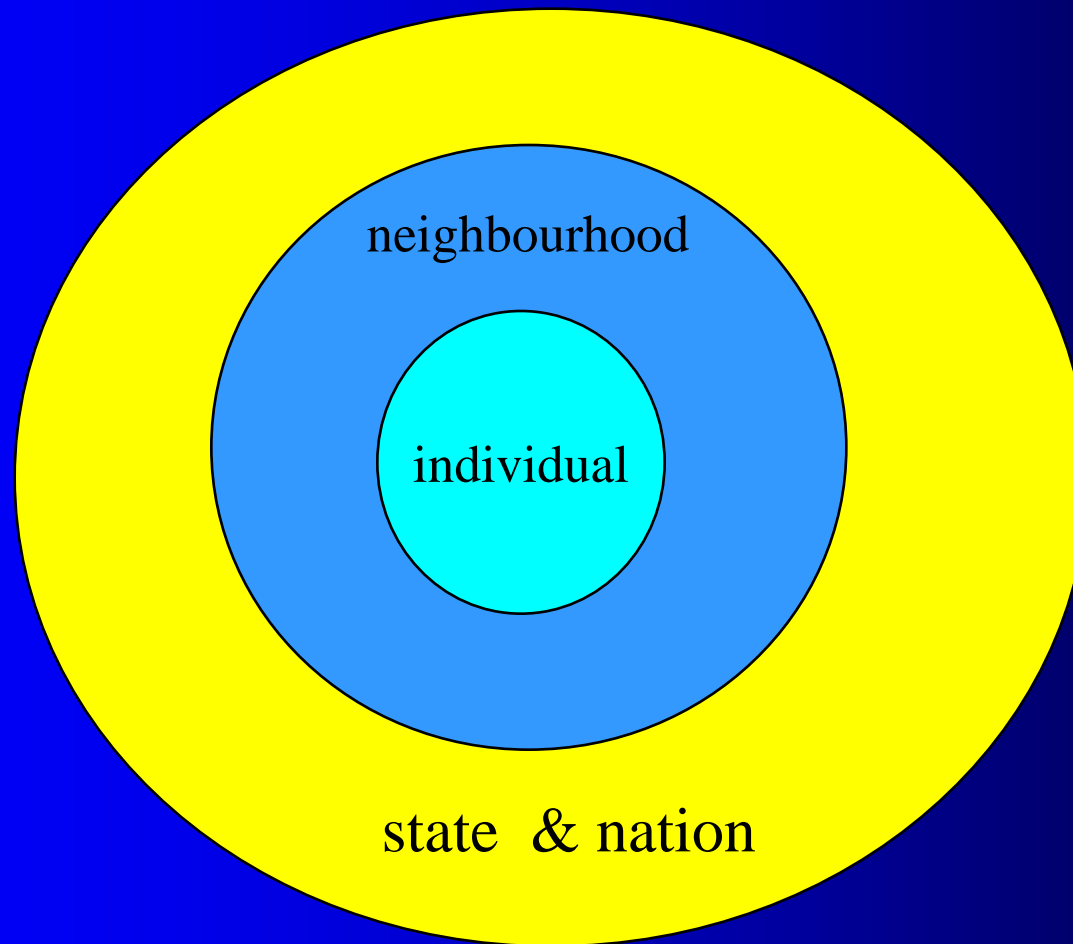
SDRG, University of Washington, USA

Richard F Catalano

summary

- examine community variation in measures of youth alcohol-related harm in 2001-04
- predict outcomes using indicators from three theories
 - economic disadvantage
 - liquor licensing density
 - Communities That Care healthy youth development indicators

community prevention context



approaches to community prevention

- situational strategies
 - community safety, security cameras, policing
 - liquor licensing
- economic strategies
 - neighbourhood renewal, employment, education
- developmental prevention
 - healthy development
 - diversion

what were the
community rates
of youth alcohol-
related harm in
Victoria in
2001/04?



Turning Point
Alcohol & Drug Centre

08

ALCOHOL USE AND RELATED HARM AMONG YOUNG PEOPLE ACROSS VICTORIAN LOCAL GOVERNMENT AREAS 2006

Laslett, A.M., Matthews, S., & Dietze, P. (2006) The Victorian Alcohol Statistics Handbook 08: Alcohol use and Related Harm Among Young People Across Victorian Local Government Areas. Turning Point, Melbourne.

RURAL



METROPOLITAN

Victoria Police Law Enforcement Assistance Program (LEAP) database. Postcode of residence of assault victims. Rate of assaults 2001/04 per 10,000 youth aged 24 and under

Table 5 Average annual rate of alcohol-related assault of residents aged 18–24 years, Victorian regions, 2001/02–2004/05

Region	Total*	Average annual rate			Significantly different from Victorian rate
		per 10,000 per year	Lower CI	Upper CI	
Barwon–South Western	512	36.60	33.50	39.92	Yes – higher
Grampians	354	41.65	37.42	46.22	Yes – higher
Loddon Mallee	447	38.70	35.20	42.47	Yes – higher
Hume	409	42.48	38.47	46.81	Yes – higher
Gippsland	485	53.99	49.29	59.02	Yes – higher
North and West Metropolitan	1,646	23.73	22.60	24.91	Yes – lower
Eastern Metropolitan	1,018	22.63	21.26	24.06	Yes – lower
Southern Metropolitan	1,309	26.64	25.21	28.12	No
Victoria	6,180	28.59	27.88	29.31	

Source: Victoria Police, Law Enforcement Assistance Program, 2001/02–2004/05

* Totals are for financial years 2001/02 to 2004/05 combined. Region totals may not add to Victorian total due to rounding

alcohol-related hospital admission rates 2001/04 per 10,000 youth aged 15-19. Victorian Admitted Episodes Dataset (VAED). 'External cause' hospital admissions - where environmental events, circumstances and conditions have resulted in poisoning, injury or other adverse effects (include road injuries, alcoholic beverages poisoning, fall injuries, suicide, assault and child abuse).

Victoria

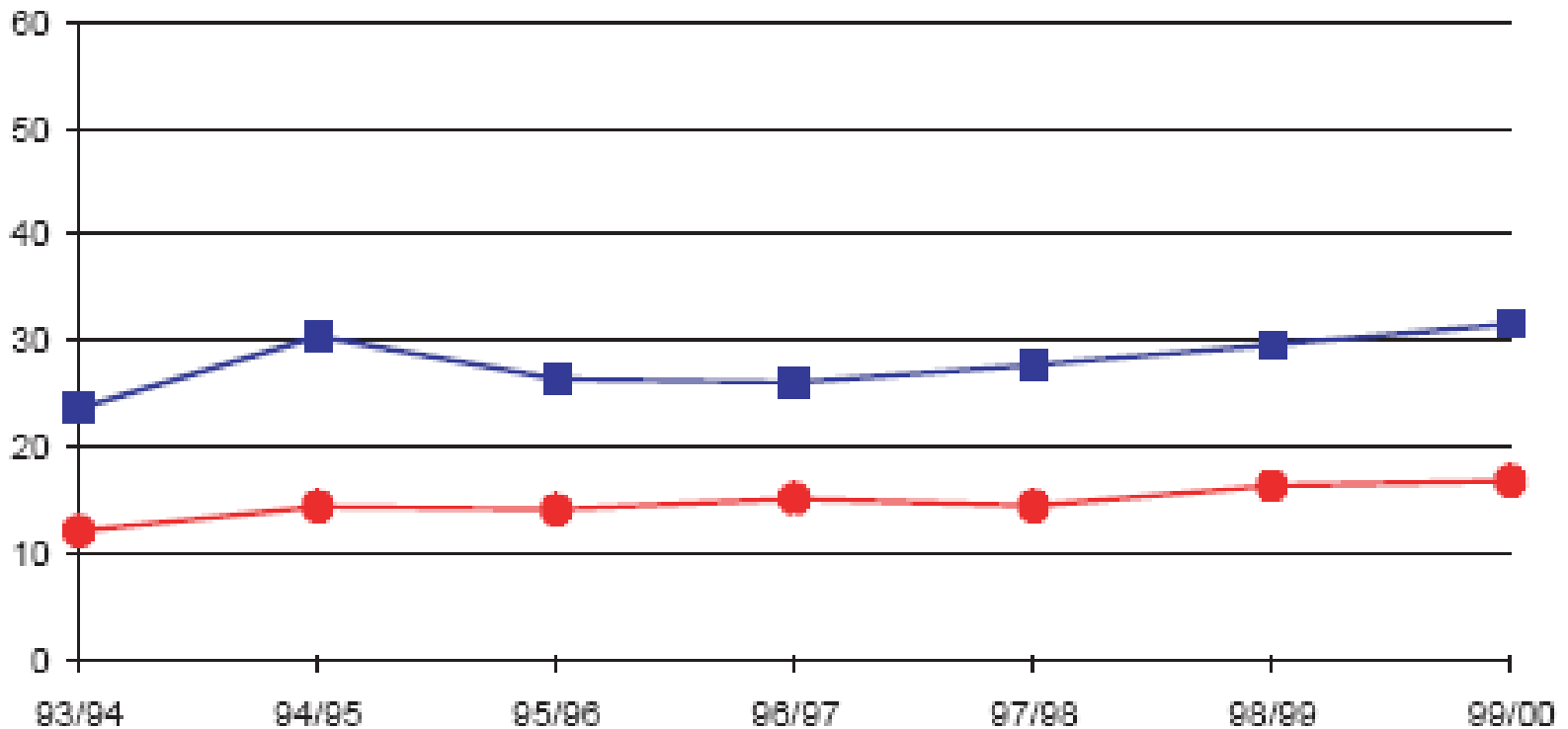


Figure 5: Alcohol-attributable hospitalisations for 14–17 year olds, males and females, 1993/94–1999/00

Legend: ■ males; ● females. Y Axis: Alcohol-attributable hospitalisation rate per 10,000 14–17 yr olds.

Table 9 Average annual rate of alcohol-related hospital admissions of residents aged 15–19, Victorian regions, 2001/02–2004/05

Region	Total*	Average annual rate per 10,000	Lower CI	Upper CI	Significantly different from Victorian rate
Barwon–South Western	440	45.98	41.78	50.48	Yes – higher
Grampians	211	34.64	30.12	39.65	No
Loddon Mallee	299	35.42	31.51	39.67	No
Hume	326	44.81	40.08	49.95	Yes - higher
Gippsland	297	43.15	38.38	48.35	No
North and West Metropolitan	207	40.54	35.20	46.45	No
Eastern Metropolitan	943	34.23	32.08	36.49	Yes - lower
Southern Metropolitan	1,212	41.47	39.16	43.87	No
Victoria	5,152	38.69	37.64	39.76	

Source: Victoria Department Human Services, VAED 2001/02–2004/05

* Totals are for financial years 2001/02 to 2004/05 combined. Region numbers may not add to Victorian total due to rounding

can we forecast
community rates
of youth alcohol-
related harm?

liquor licenses (excluding BYO)
per population of 10,000 residents

Australian Bureau of Statistics
Census Index of
Advantage/Disadvantage 2001

Laslett et al (2006)

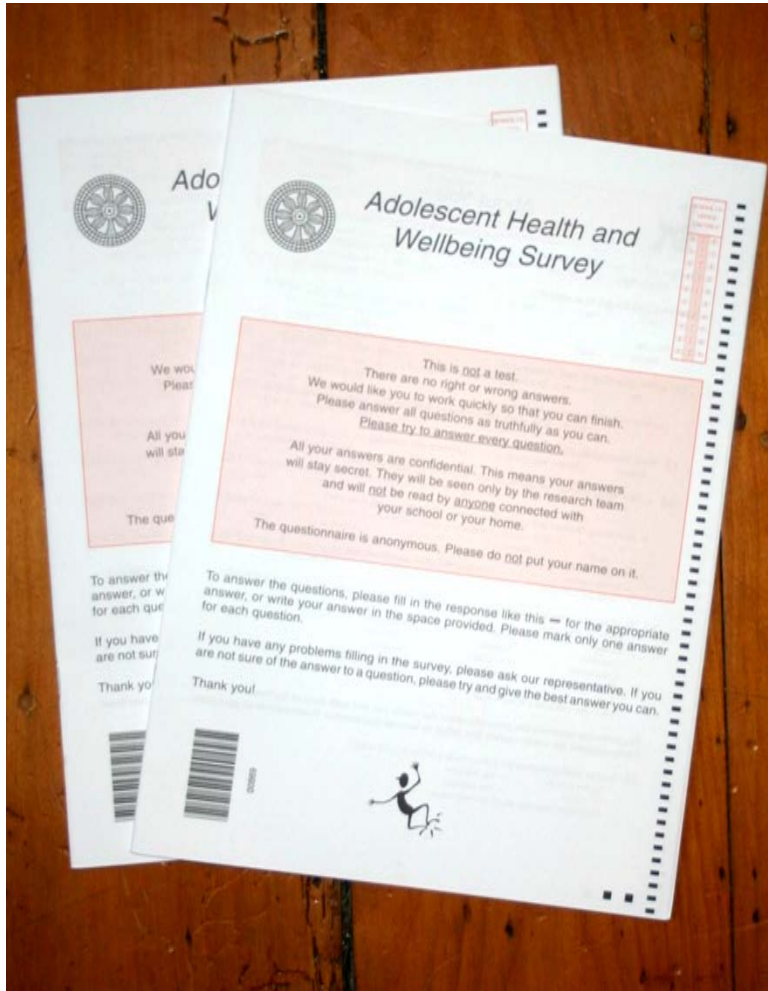
1999 Victorian Health and Wellbeing Survey

Bond, Toumbourou, Patton et al

Communities That Care Youth Survey

Hawkins, Catalano & Arthur

What the Survey Provides



- > Risk factor profile
- > Protective factor profile
- > Prevalence of problem behaviours

risk and protective
factors consistently
identified in international
longitudinal and
intervention research

Family

Behaviour

Community

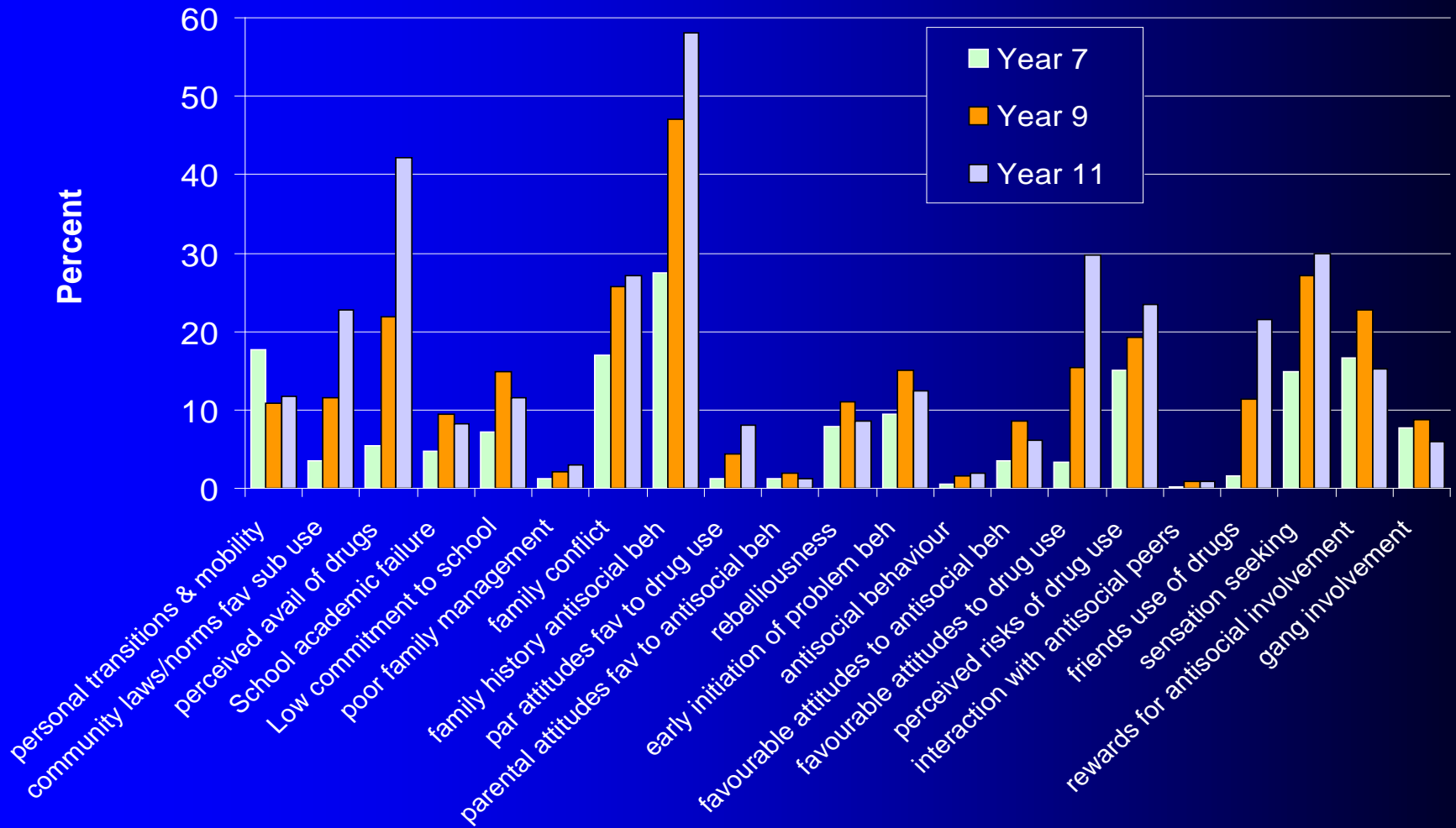
adolescent
health
behaviour

Attitudes

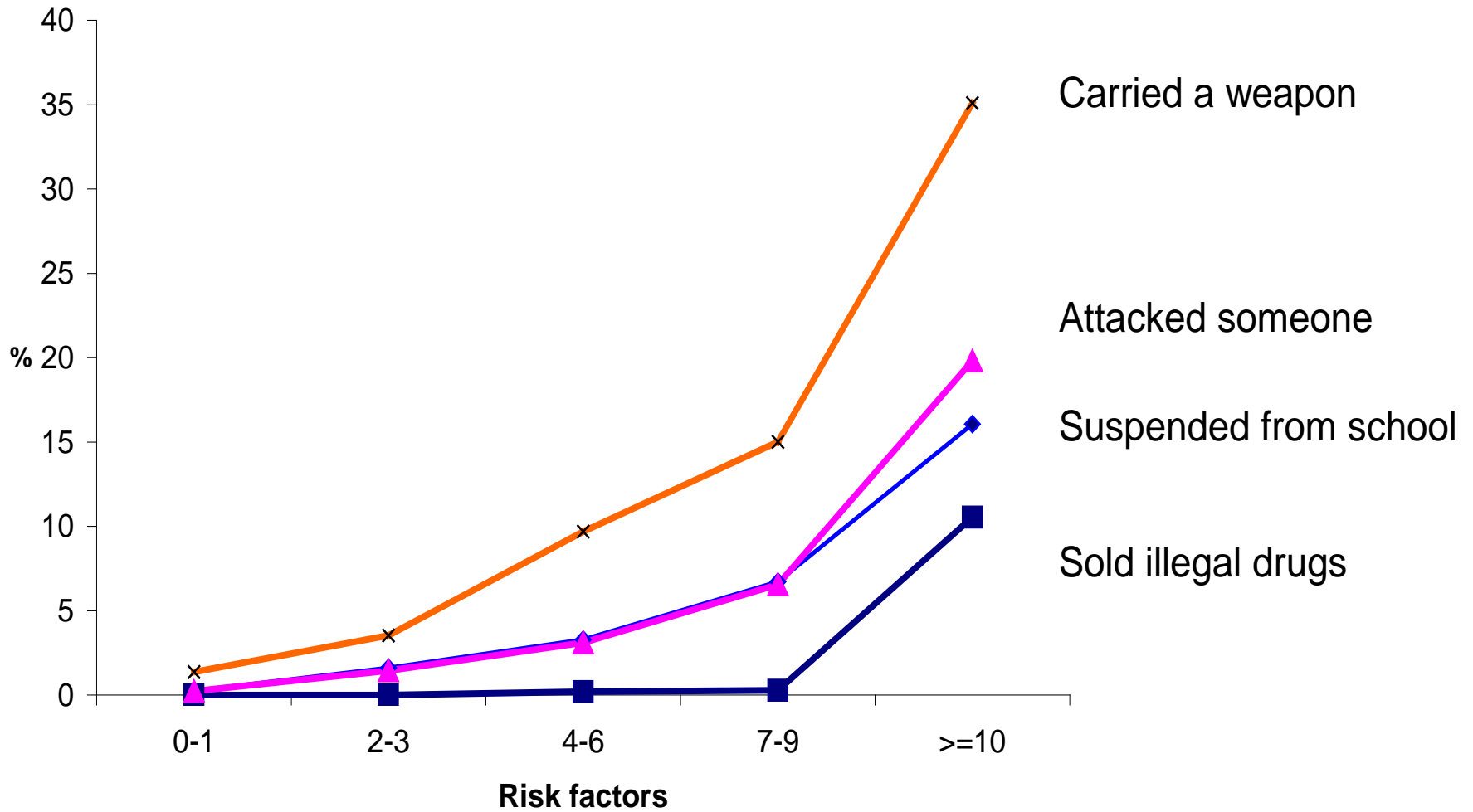
School

Peers

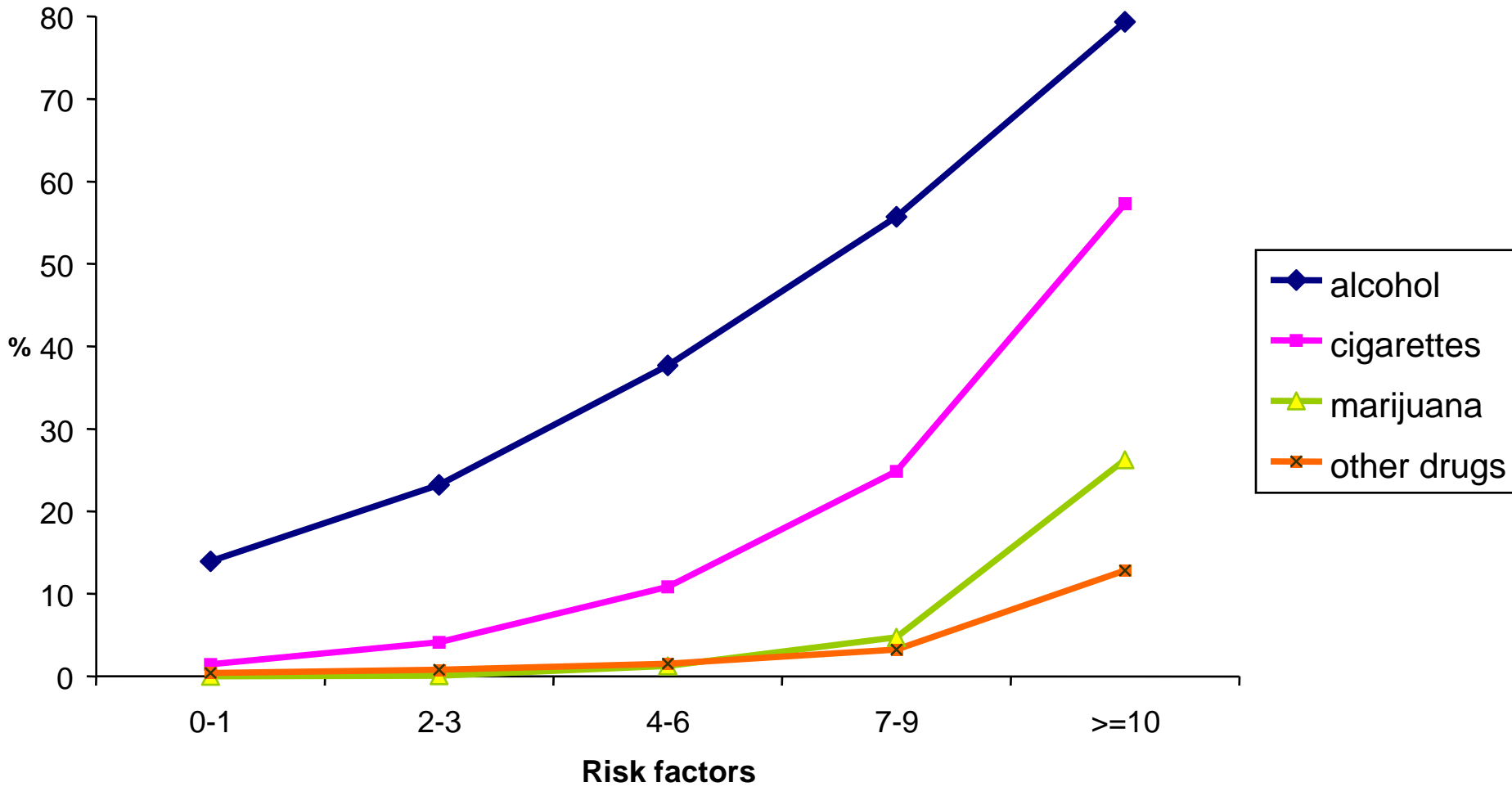
Prevalence of Risk Factors by Year Level



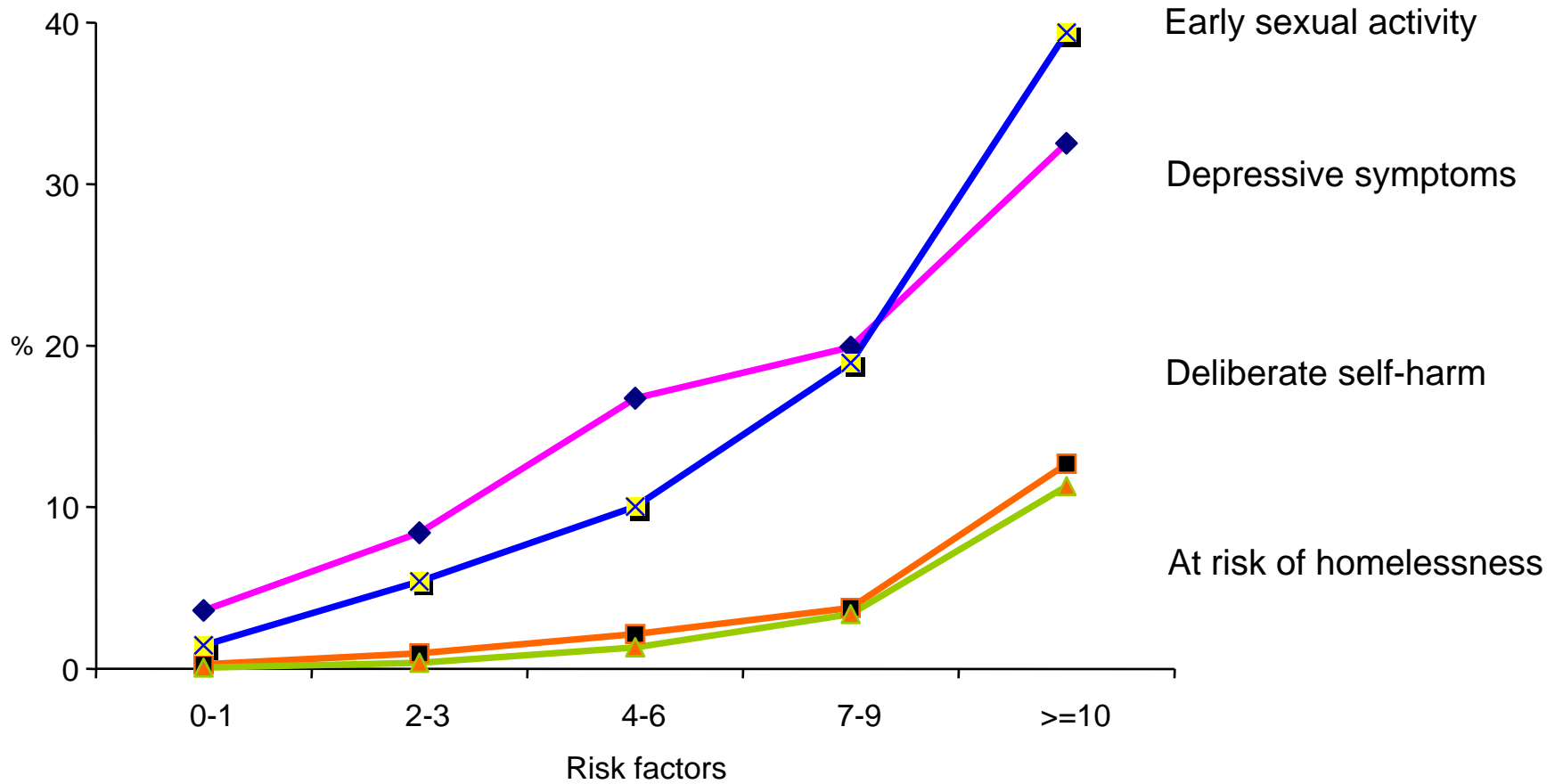
Elevated risk factors for anti-social behaviour



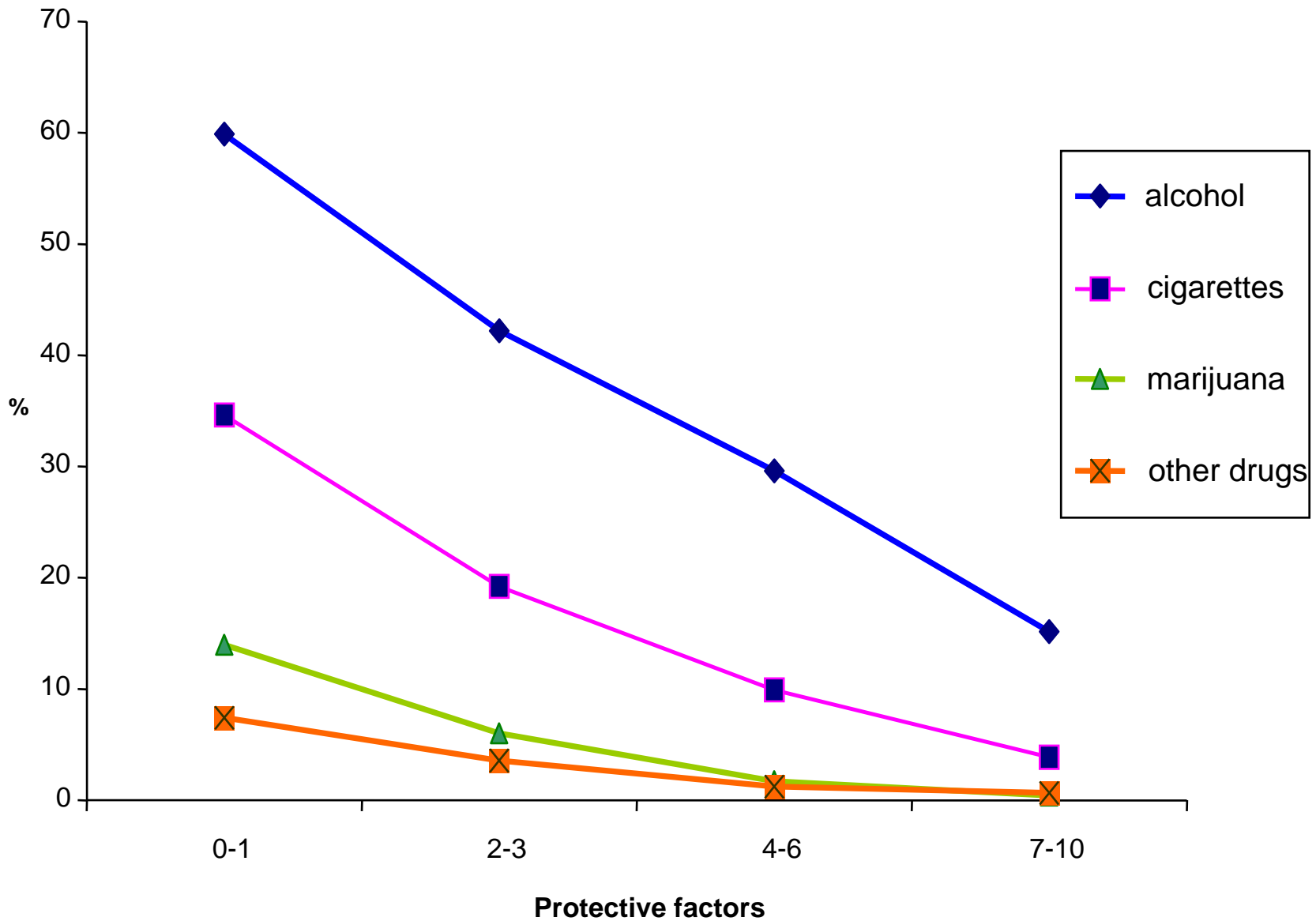
Elevated risk factors for recent substance use

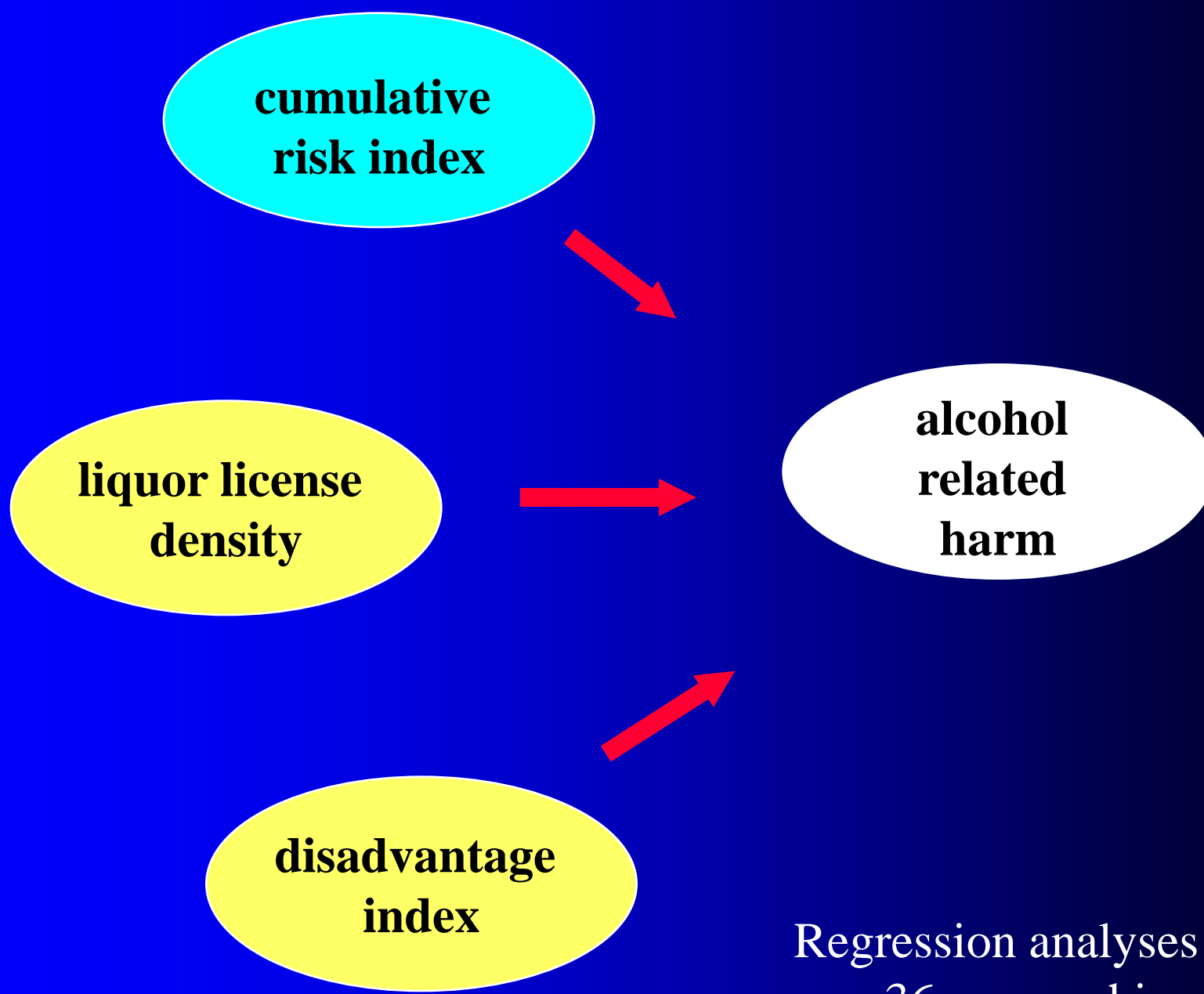


Elevated risk factors for mental health and social problems



Elevated protective factors for recent substance use (past 30 days)





**cumulative
risk index**

**liquor license
density**

**disadvantage
index**

**alcohol
related
harm**

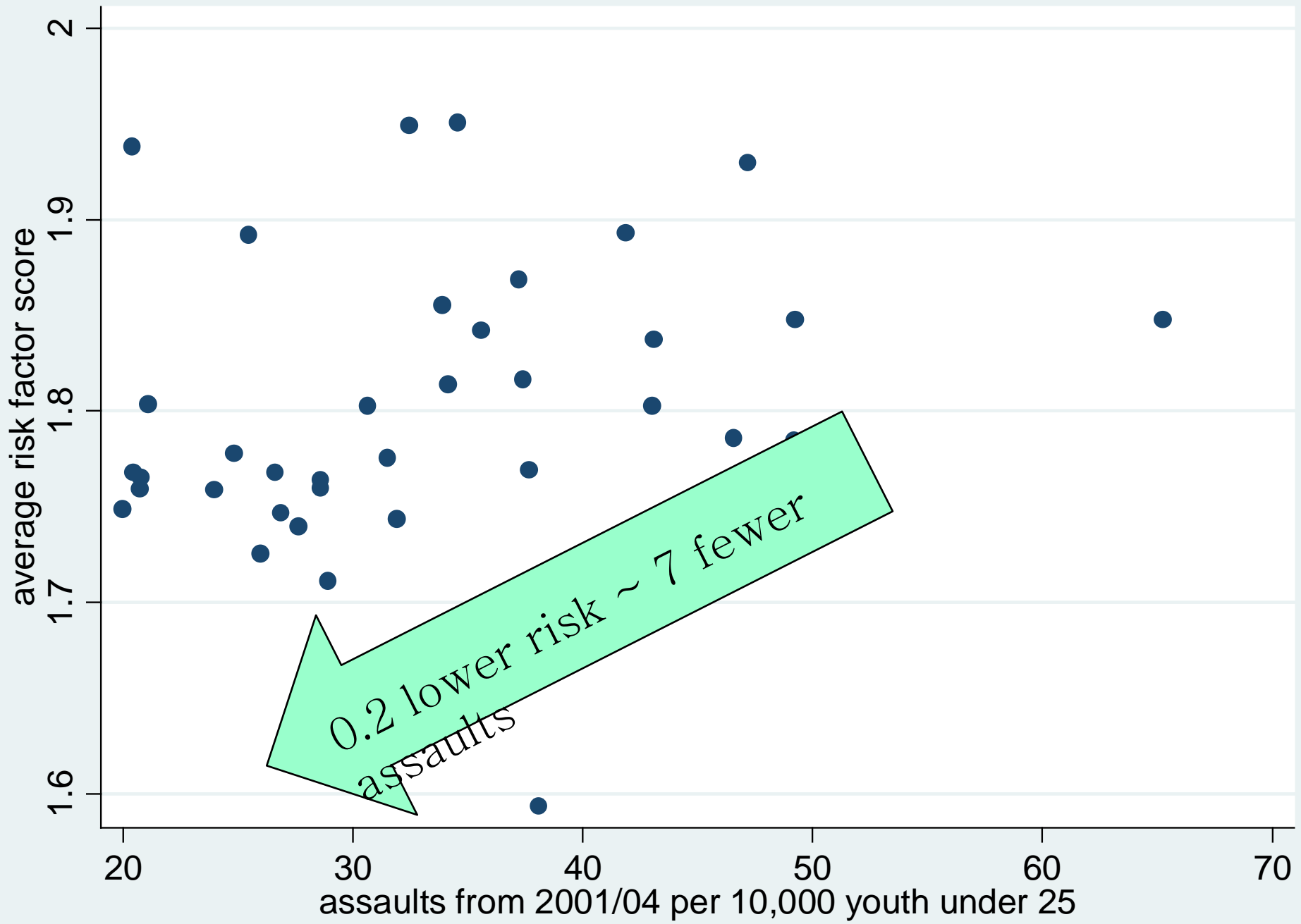
Regression analyses
n = 36 geographic units

Correlations

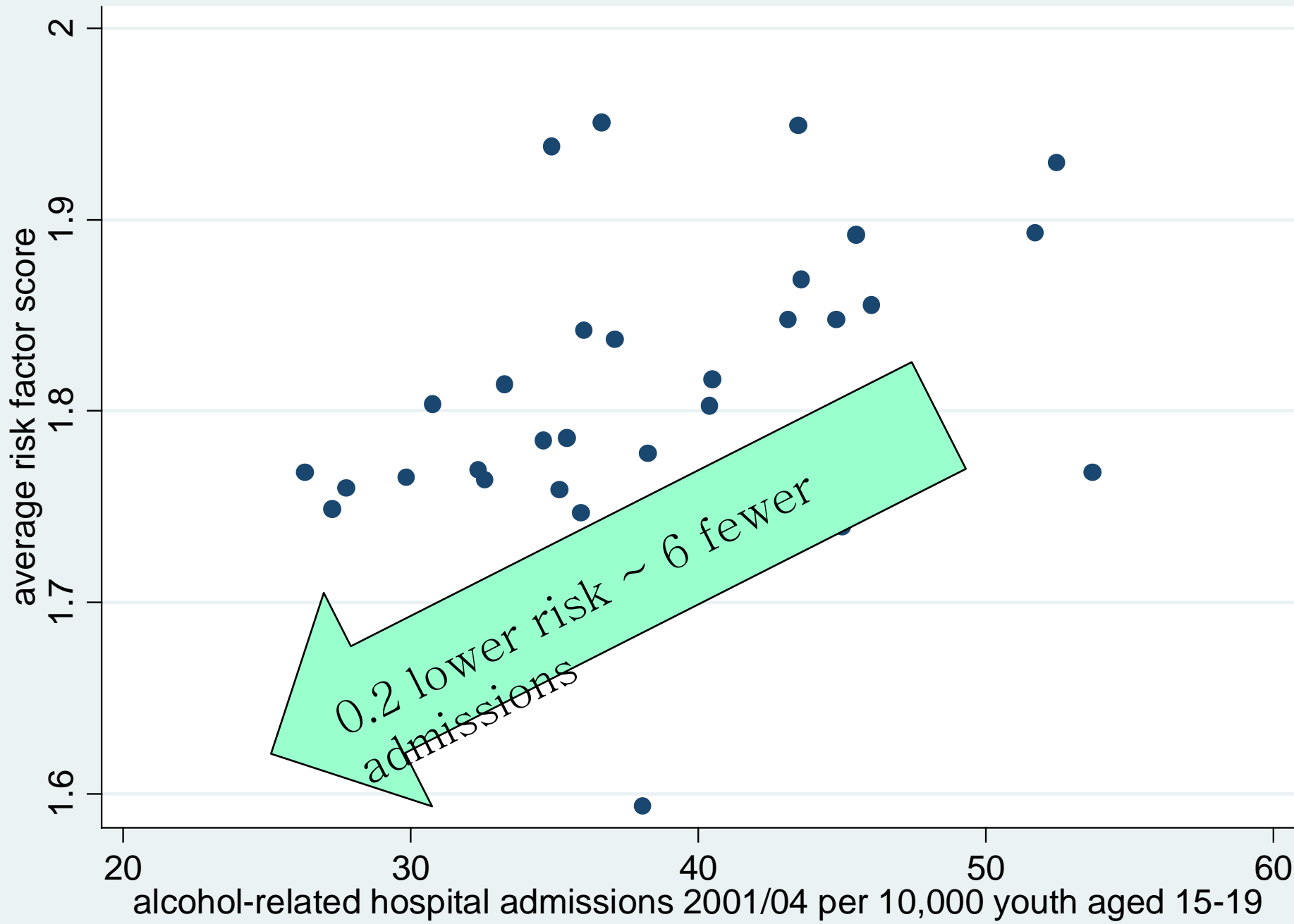
n = 36 geographic units

	Assaults	Hospit	Av_risk	Av_protect	Licenp
Hospital admissions	0.39*				
Average risk score	0.25	0.35*			
Average protection	-0.18	-0.39*	-0.74*		
License premises density	0.14	0.25	0.02	-0.04	
Socioeconomic Advantage	-0.54*	-0.25	0.03	0.23	0.32

	<i>std B</i>	p
Risk score	0.24	0.03
Socioeconomic status	-0.64	0.00
Liquor licenses	0.06	0.69
Low SES x Liquor licenses	0.48	0.00
	R^2	= 62%



	<i>std B</i>	p
Risk score	0.36	0.02
Socioeconomic status	-0.38	0.02
Liquor licenses	0.43	0.03
Low SES x Liquor licenses	-0.12	0.70
	R^2	= 31%



Conclusions

- under 25 alcohol assaults were independently predicted by cumulative risk, disadvantage, and liquor license density in disadvantaged areas. These variables explain 62% of the variance.
- age 15/19 hospital admissions were independently predicted by disadvantage, liquor license density and cumulative youth risk. These variables explain 31% of the variance

Conclusions 2

- providing a variety of monitoring information appears warranted for strengthening community prevention efforts
- child-report may be a valuable addition to existing data
- a variety of forms of community prevention appear warranted
 - economic disadvantage
 - liquor licensing density
 - healthy youth development

Communities that Care

Stages

1. establishes a local community prevention task force
- key leaders and community members
2. comprehensive risk and protection assessment
3. local assessment of services & resources
4. identifies community prevention priorities
5. implementation of an effective community prevention plan
6. ongoing monitoring

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Communities that Care

State

State &
regional
staff

Local
government
& residents

Common
training
events

1. establishes a local community risk force
- key leaders and community members
2. comprehensive risk and protection assessment
3. local assessment of services & resources
4. identifies community prevention priorities
5. implementation of an effective community prevention plan
6. ongoing monitoring and evaluation

Communities that Care Stages

Youth
forums,
surveys

1. establish a local community prevention task force
- key leaders and community members
2. comprehensive risk and protection assessment
3. local assessment of services & resources
4. identify community prevention opportunities
5. implement an effective prevention program
6. ongoing monitoring

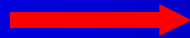
Archival
data

Local
perspectives

CTC vision for health promotion



preventing
problems



promoting positive youth
development

effective prevention
programs



locally-monitored
community prevention
systems



Communities That Care in Australia



Darwin

NORTHERN
TERRITORY

QUEENSLAND

Alice
Springs

WESTERN
AUSTRALIA

Brisbane

SOUTH
AUSTRALIA

NEW
SOUTH
WALES

Perth

Bunbury

Ballarat

Sydney

Adelaide

CANBERRA

VICTORIA

Melbourne

**Mornington
Peninsula**

The story so far ...

- Three pioneer communities have successfully implemented the Communities That Care program and overall pre- post-analyses suggest community improvements
- At the next phase a 14 x 14 community randomised trial is being implemented

planned interventions and anticipated impacts

2011-12

* **Social marketing of NHMRC guidelines**

* **Effective prevention programs**

* **Community mobilisation strategies**

2012-13

* **Fidelity measurement and feedback**

* **Reduce risk factors, enhance protection**

2013-14

* **Reduce early and frequent alcohol use**

* **Reduce underage alcohol - hospitalisation**

An opportunity to
evaluate the economic
benefits of community-
level prevention

Evaluating the benefits of prevention

- Bring together relevant stakeholders
 - VicHealth, Federal, State, philanthropic sector, others
- Clarify the priority prevention targets
- Contribute to systematic review process
- Explore variation in State and community funding mechanisms
- Develop a community indicators framework
- Test community prevention / economic benefit assumptions
- Seek clearer prevention funding mechanisms

three health economic reports

2011-12

**Report 1: The economic benefits of
community prevention**

2012-13

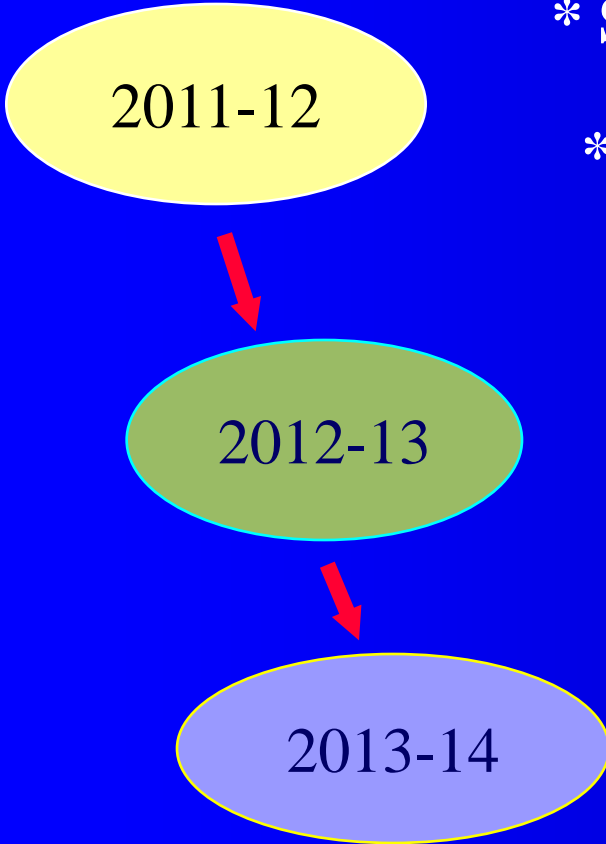
**Report 2: Funding mechanisms
and state variations**

2013-14

**Report 3: Economic impact in
14 Australian communities**

Potential interventions and anticipated impacts

2011-12



2012-13

2013-14

- * **Social marketing of NHMRC guidelines**

- * **Effective prevention programs**

- * **Community mobilisation strategies**

- * **Fidelity measurement and feedback**

- * **Reduce risk factors, enhance protection**

- * **eg. Reduce early and frequent alcohol use**

- * **eg. Reduce underage alcohol - hospitalisation**

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