
Communities That Care®

Communities That Care Ltd

a partnership between the Royal Children's Hospital, the Rotary Club of Melbourne & the University of Washington


Darwin
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WESTERN AUSTRALIA
SOUTH AUSTRALIA
Brisbane
NEW SOUTH WALES
Sydney
CANBERRA
Perth
Bunbury
Adelaide
Ballarat
VICTORIA
Melbourne
Mornington

A prospective validation of the Communities That Care youth survey in Australia.

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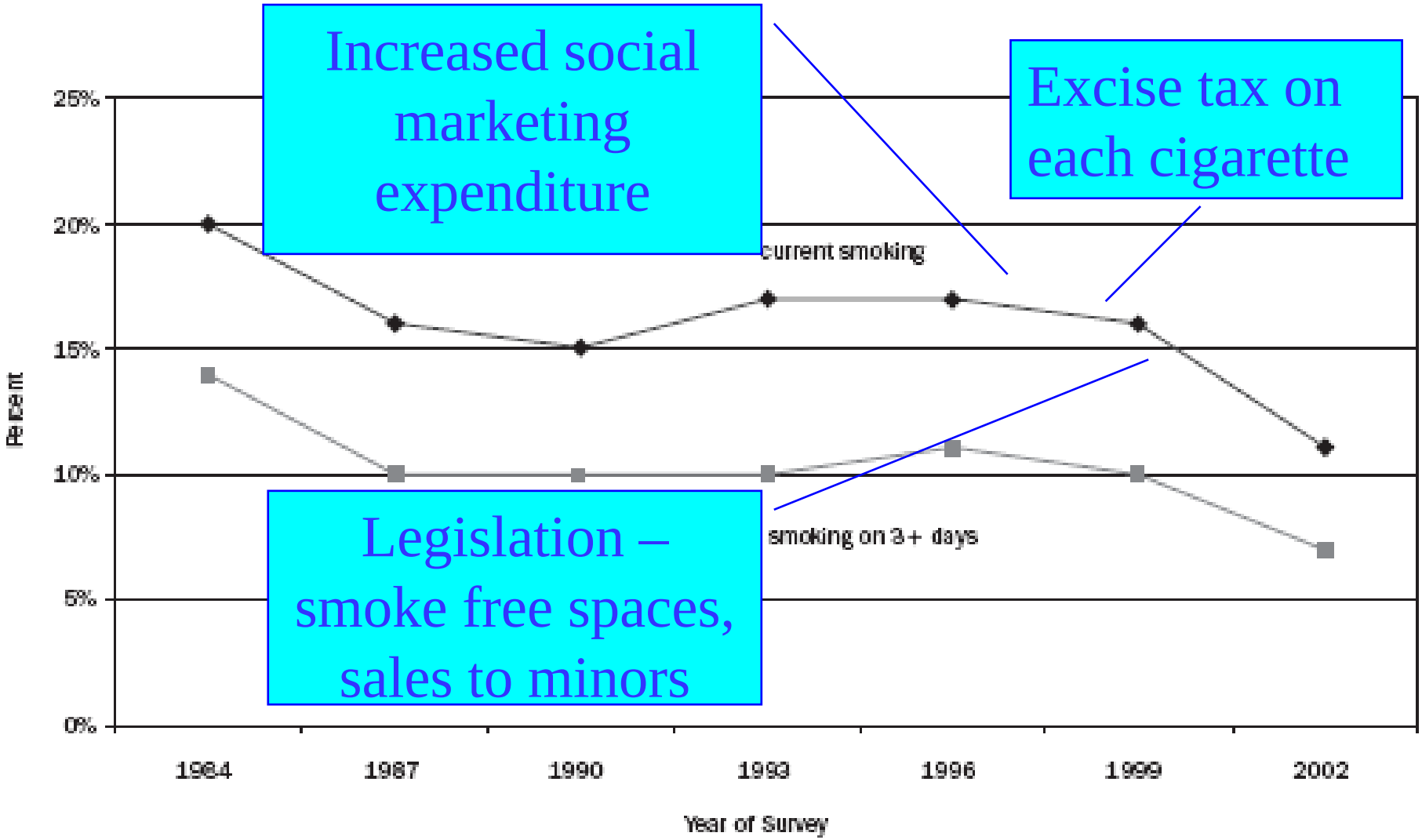
VicHealth Senior Research Fellow,
Murdoch Children Research Institute
CEO Communities That Care Ltd

Dr Jo Williams, Professor Richard Catalano, Dr Sheryl Hemphill

child and adolescent health in Australia

Australian public health approaches are effective

Figure 2: Trends in proportion of current smoking (smoked in past week) and committed smoking (smoked on 3 or more days of past week) among 12–15-year-old students



White et al, (2004) National School Survey

Australian harm minimisation policies have reduced youth deaths related to alcohol

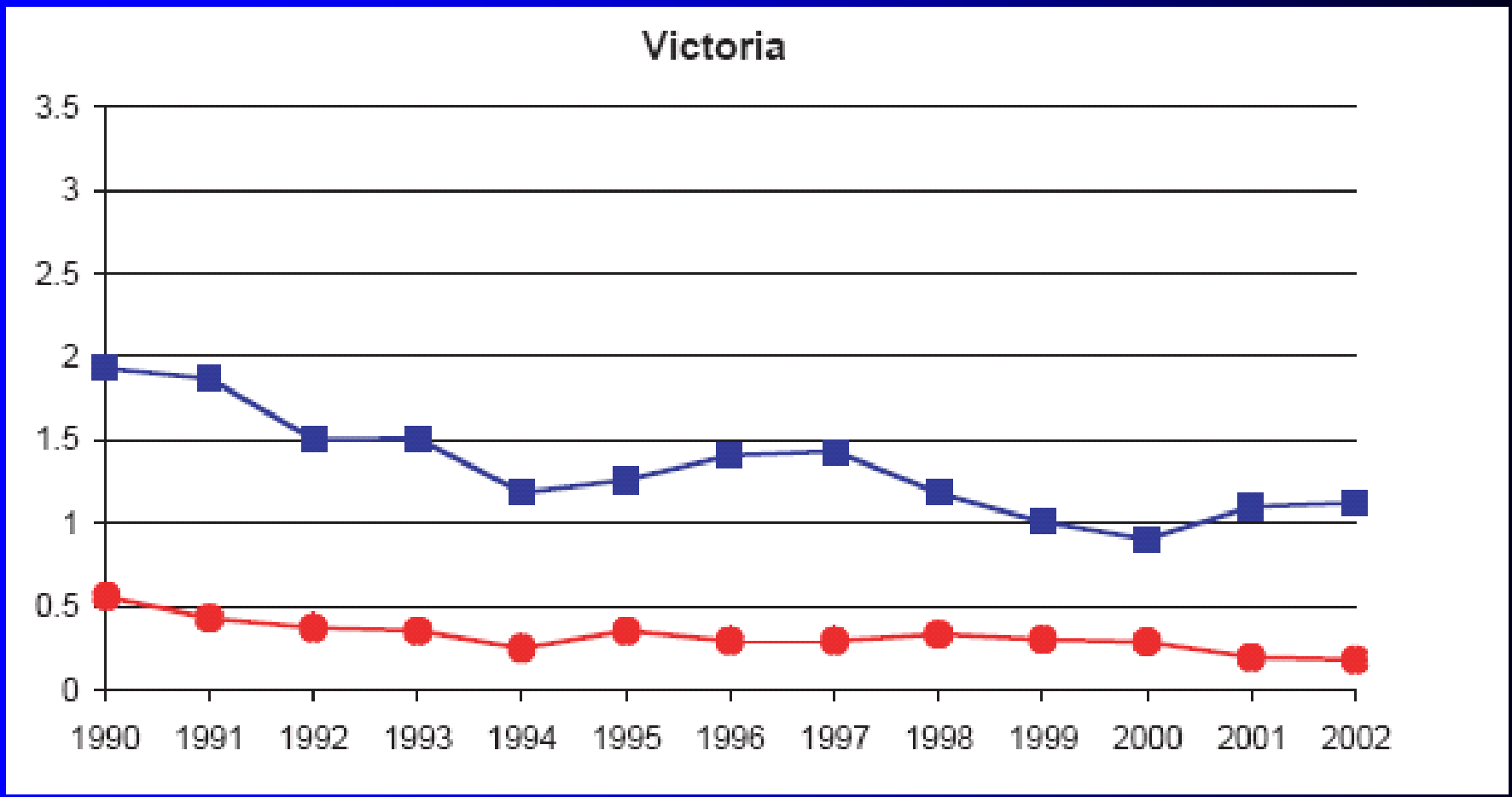


Figure 1: Alcohol-attributable deaths for 15–24 year olds, males and females, 1990–2002
Legend: ■ males; ● females. Y Axis: Alcohol-attributable death rate per 10,000 15–24 yr olds.

National Alcohol Indicators Bulletin. 6

the trends are not so positive for other harms

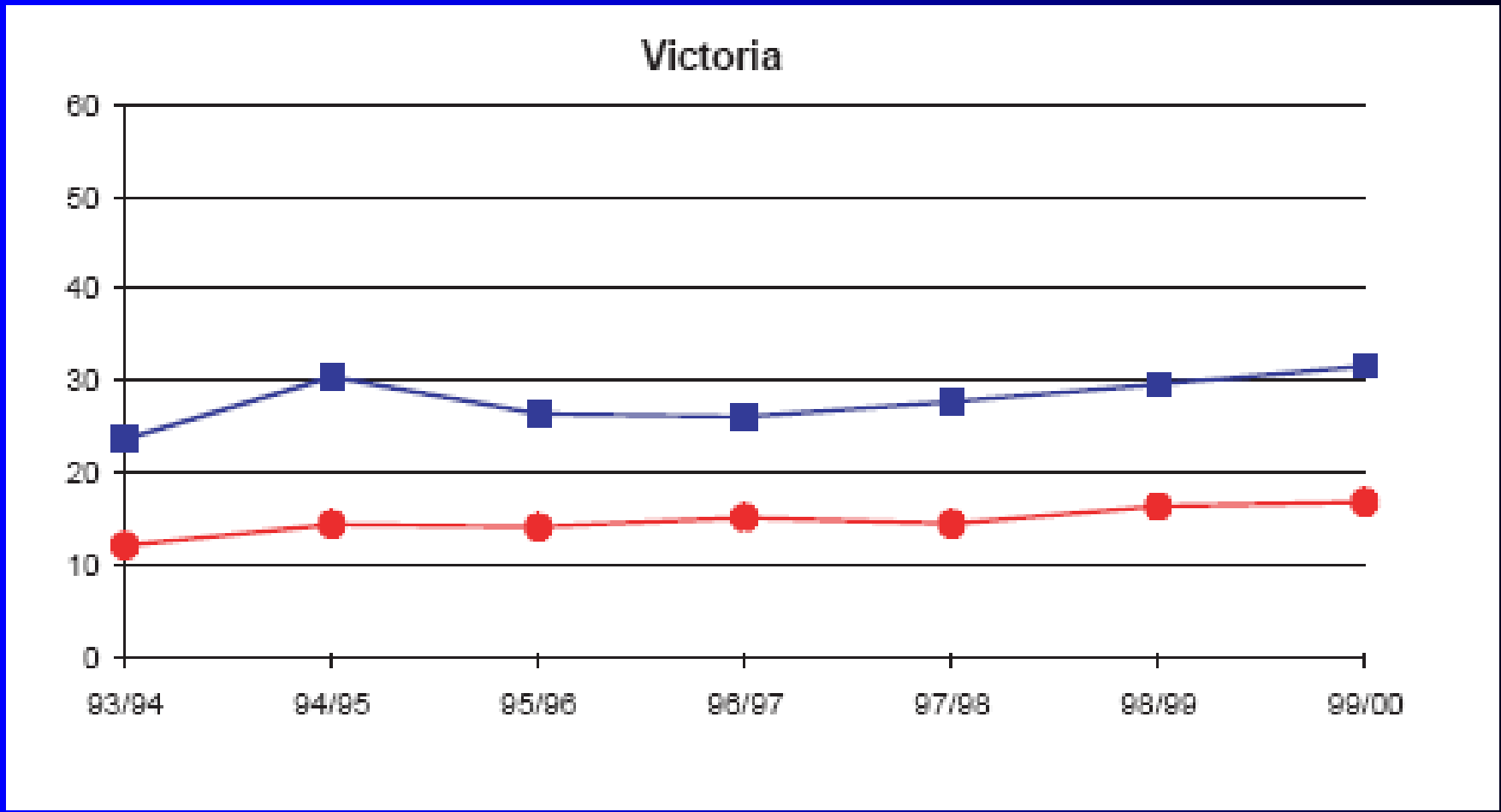


Figure 5: Alcohol-attributable hospitalisations for 14–17 year olds, males and females, 1993/94–1999/00
Legend: ■ males; ● females. Y Axis: Alcohol-attributable hospitalisation rate per 10,000 14–17 yr olds.

National Alcohol Indicators Bulletin. 7

We are not monitoring developmental harm

- ? Female heavy alcohol use contributing to problems with infants & children
- ? Early use increasing levels of dependence
- ? Mental health impacts (eg., self-harm)
- ? Brain impacts

Prevention Clearinghouse No. 13, 2004

Youth & child health Australia

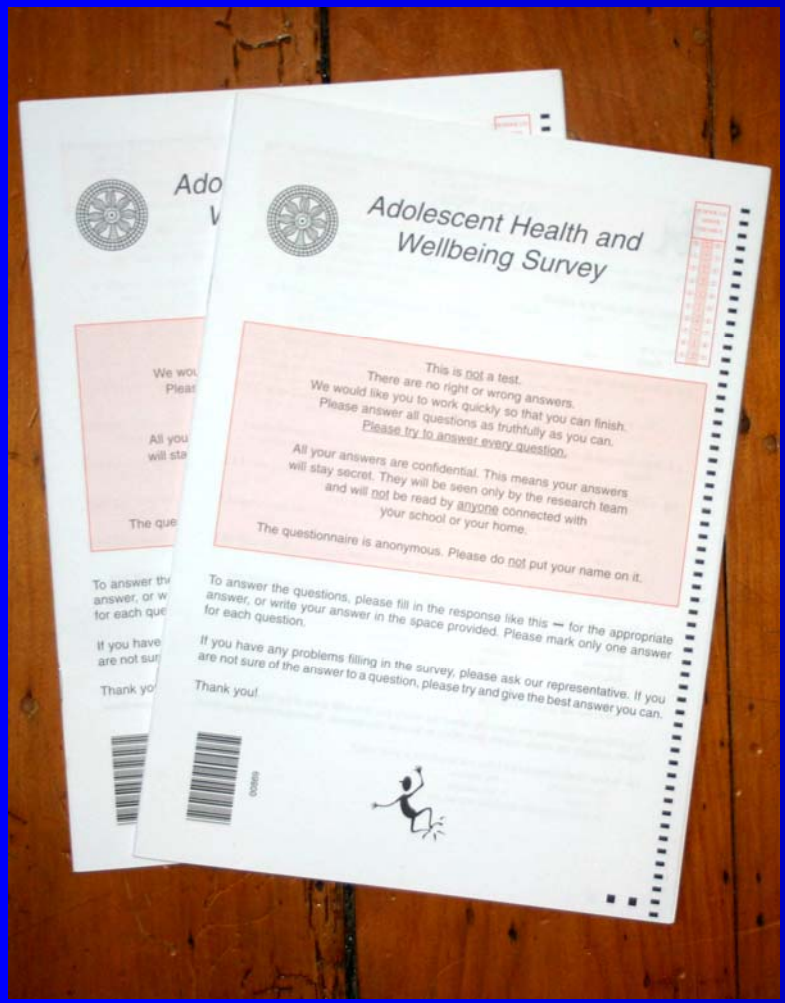
- continuing reductions in mortality
- successes in containing HIV/ AIDS
- recent reductions in high rates of tobacco use
- some recent reductions in illicit drug use
- high rates of alcohol misuse
- high rates of mental health problems
- increasing threat of obesity/ diabetes
- increasing sexual health problems
- rising child health problems (eg., abuse)

Australian adaptation of the Communities That Care Youth Survey

Communities That Care Youth Survey

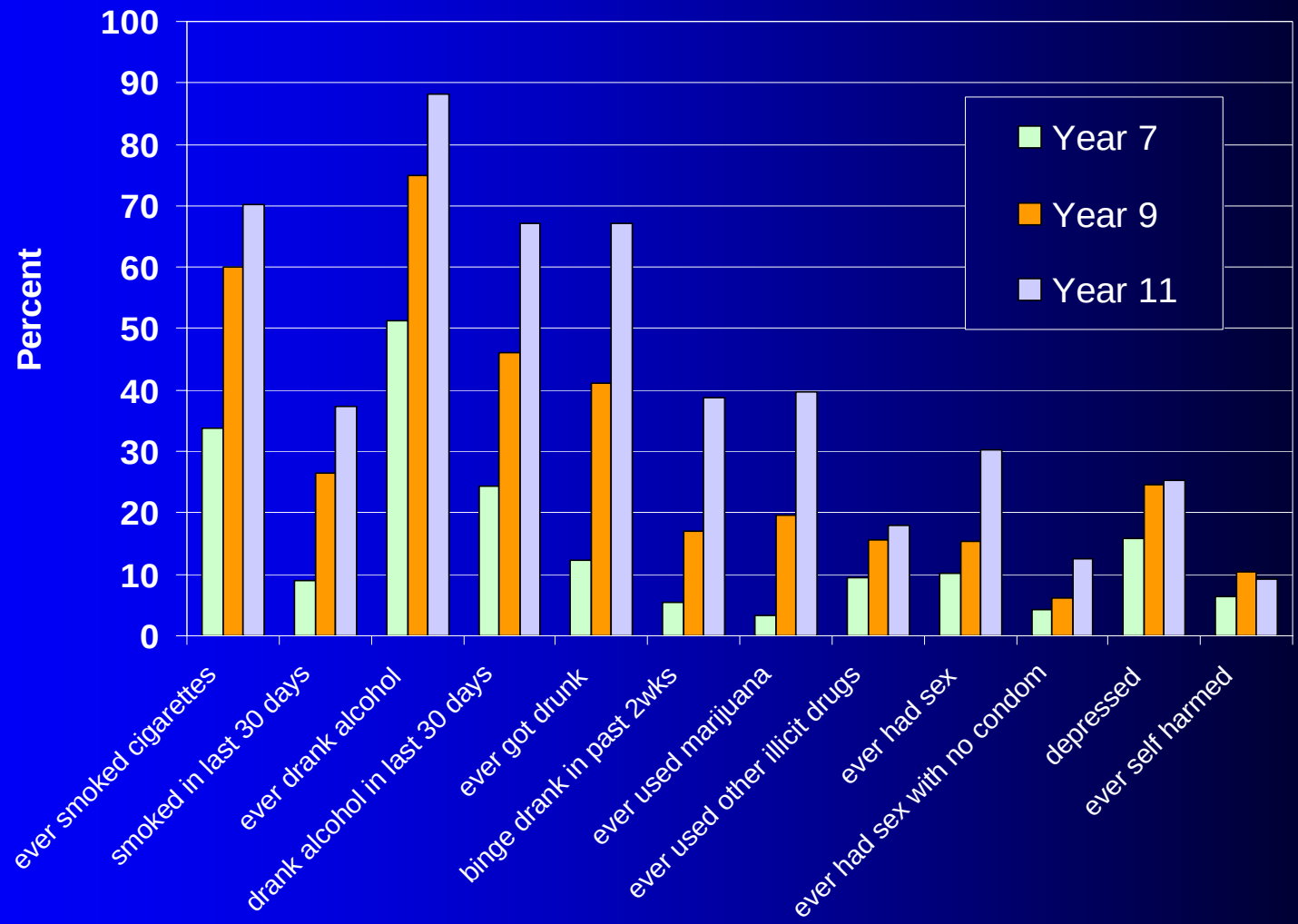
- Epidemiologically reliable ($\alpha \sim 0.7$)
- Australian adaptation
  - Cognitive pre-testing
  - Large cross-sectional survey

What the Survey Provides

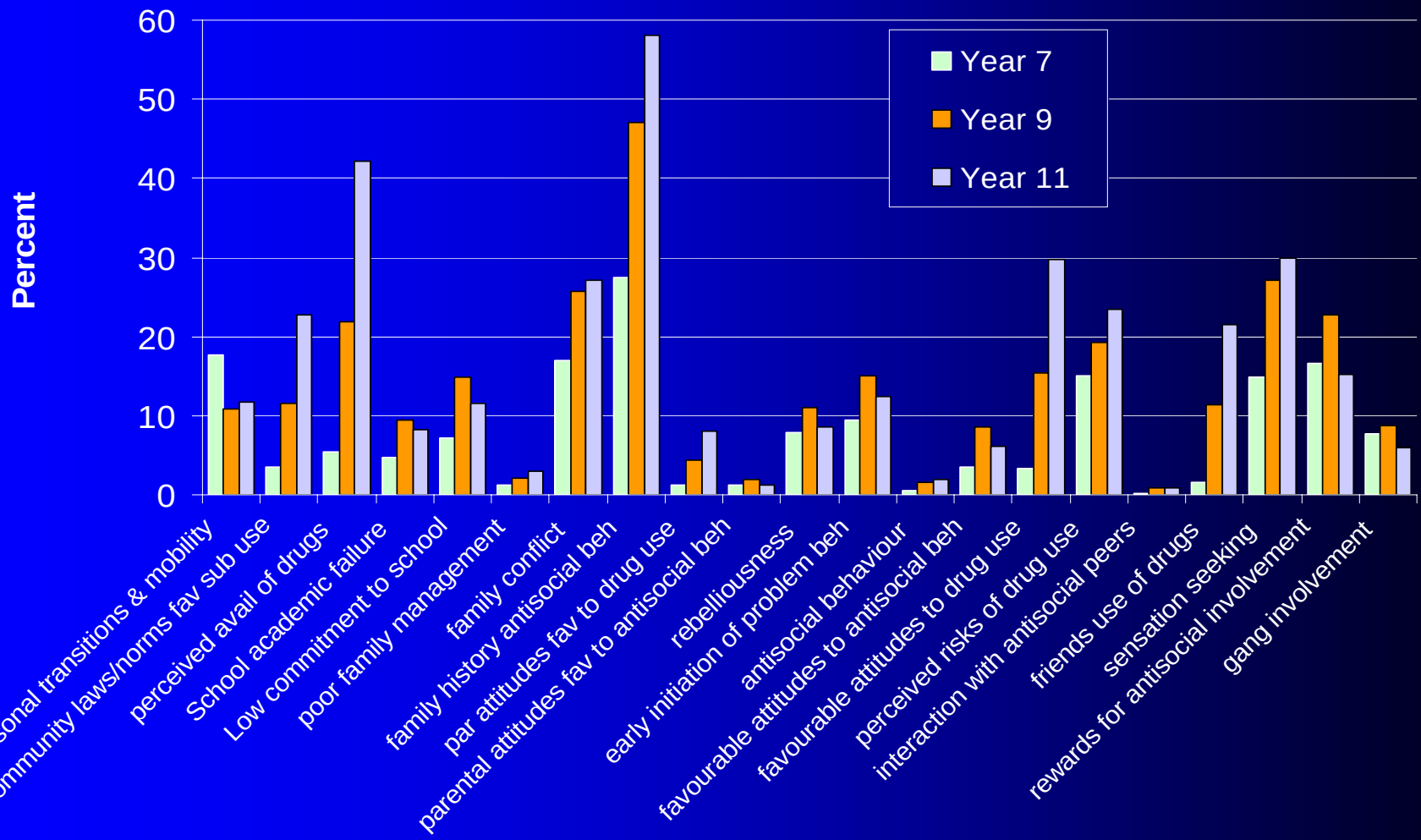


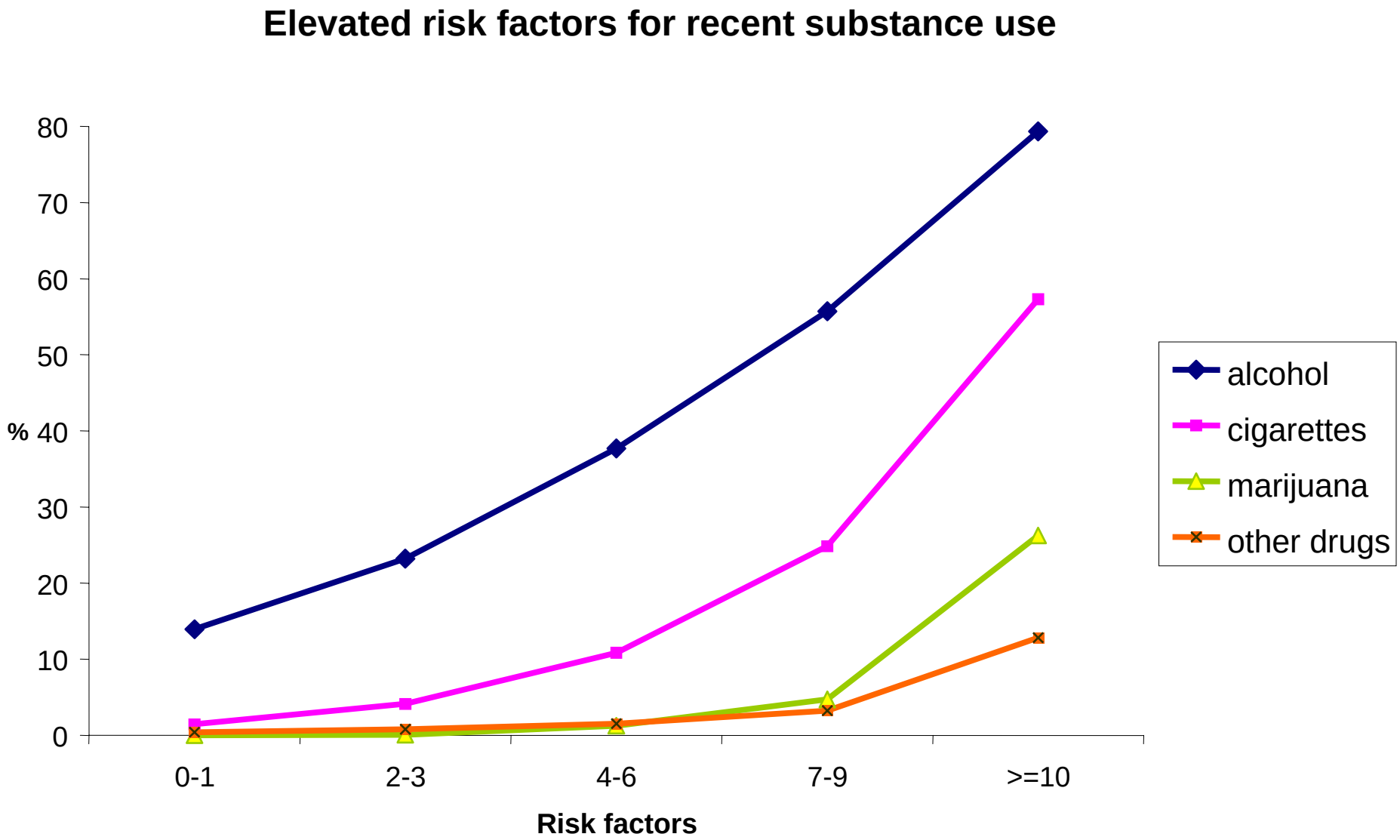
- Risk factor profile
- Protective factor profile
- Prevalence of problem behaviours

Prevalence of Behavioural Outcomes by Year Level

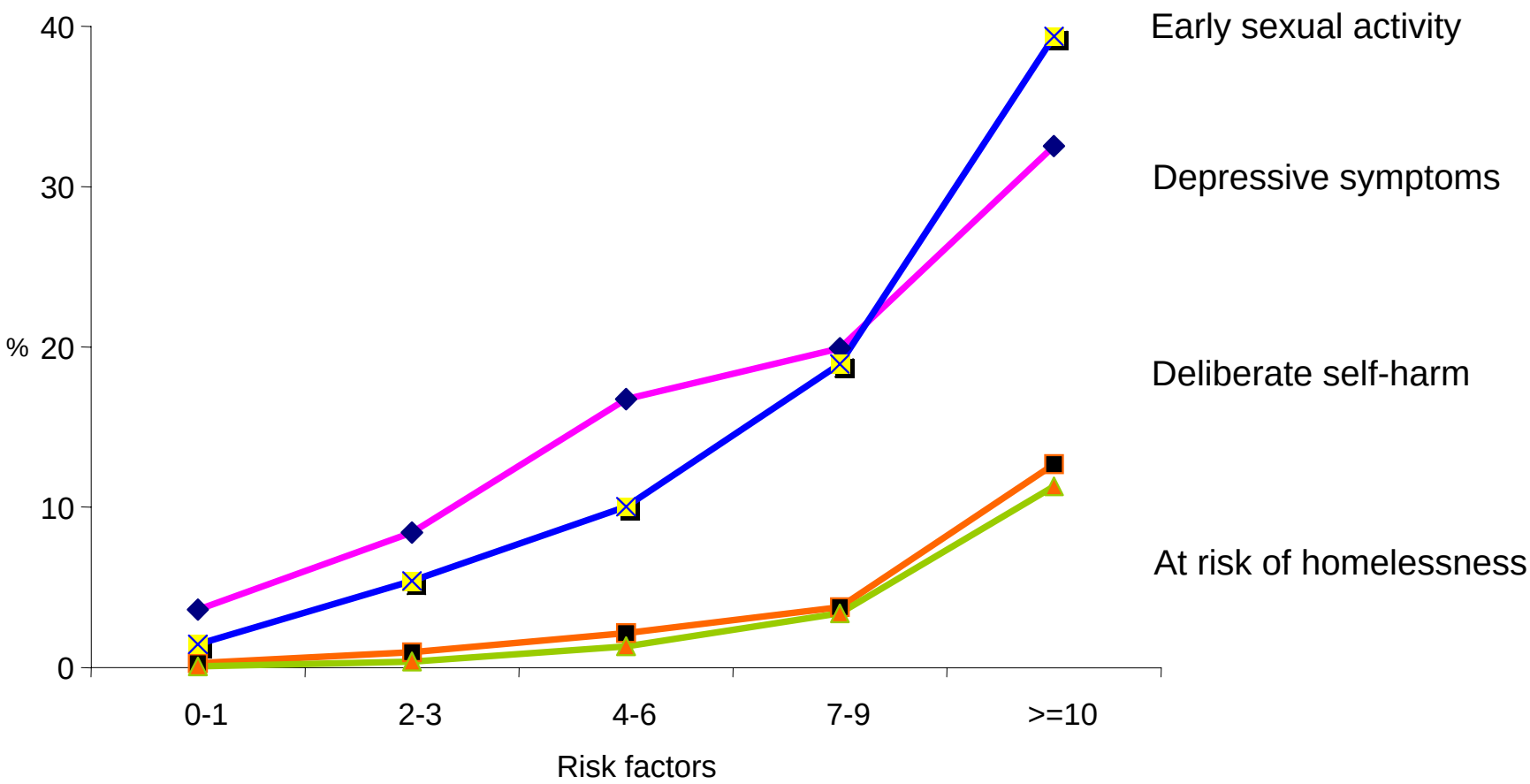


Prevalence of Risk Factors by Year Level

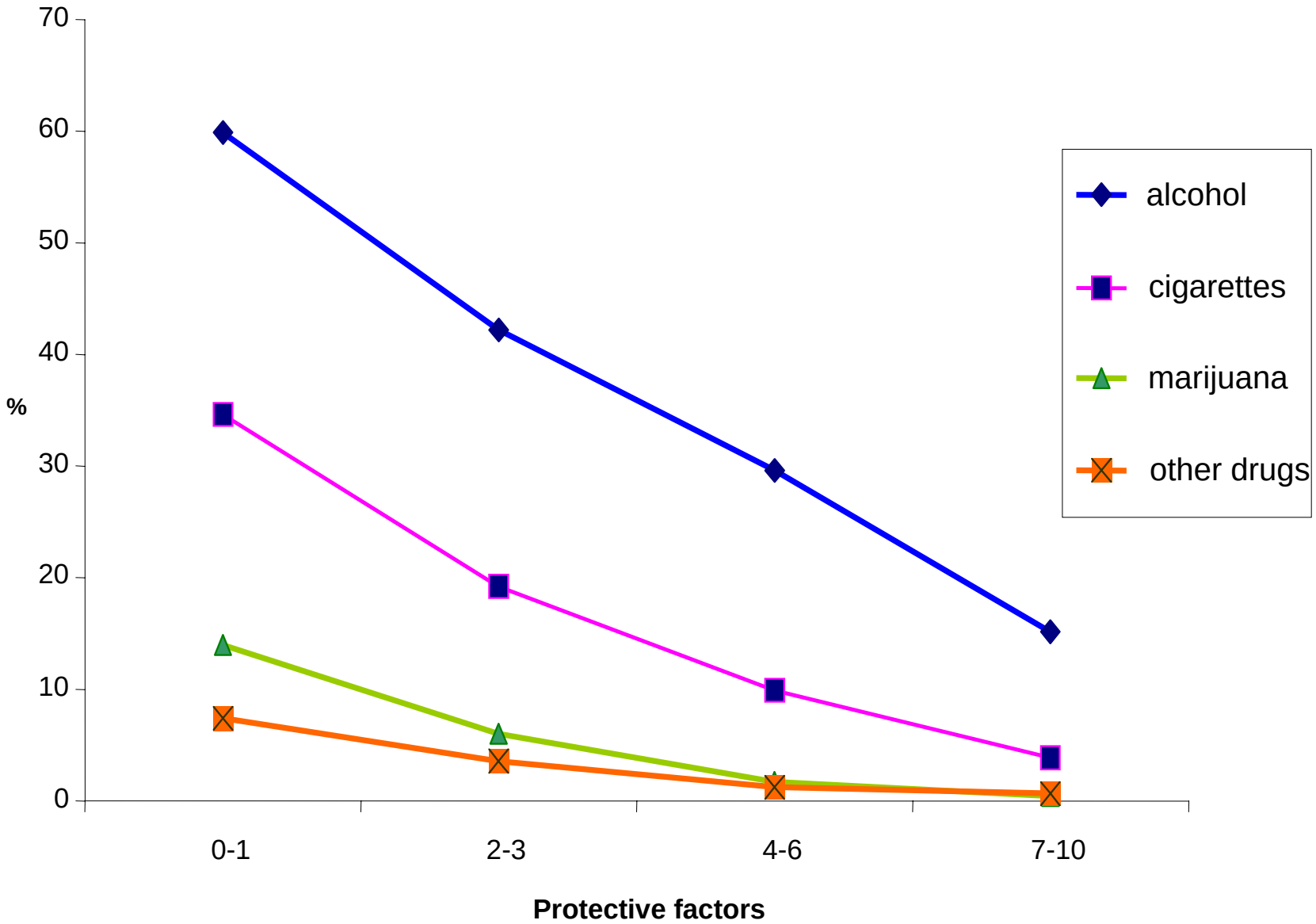



Elevated risk factors for recent substance use
80
70
60
50
% 40
30
20
10
0
0-1
2-3
4-6
7-9
>=10
Risk factors
alcohol
cigarettes
marijuana
other drugs

Elevated risk factors for mental health and social problems



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

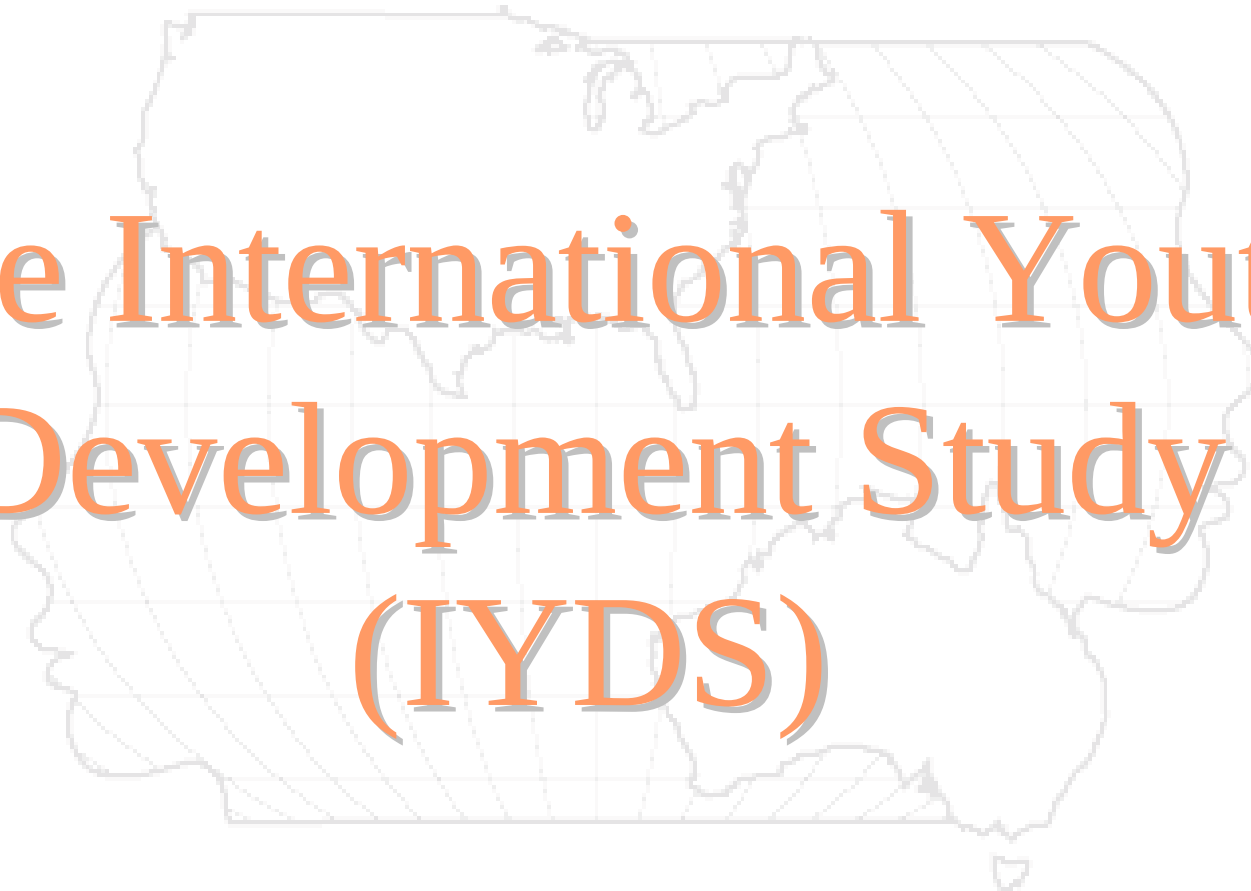


Different Pathways

early life	childhood	adolescence	adulthood
developmental deficits →	school & peer adjustment →	illicit drug & mental health problems	
comunity & family factors →	early drug use frequent use →	harmful alcohol & drug use	

Does the survey provide valid prospective prediction?

The International Youth Development Study (IYDS)



What is IYDS?

- Large scale, cross-cultural, longitudinal survey of Grade 5, 7 and 9 students in Washington State and Victoria, Australia
- Collaboration between researchers
  - Centre for Adolescent Health, Murdoch Children's Research Institute at the University of Melbourne
  - Social Development Research Group, School of Social Work at the University of Washington.
  - PI: Professor Richard Catalano
- Funded by National Institute of Drug Abuse (NIDA: DA12140)

IYDS Collaborators

Washington:

PI: Prof Richard Catalano, CIs: Ass/Prof Michael Arthur, Prof J. David Hawkins.

Project Director: Dr Barbara McMorris, Analyst: Dr Jenn Beyers.

Australia:

PI: Ass/ Prof John W. Toumbourou, CIs: Prof George Patton, Dr Lyndal Bond, Prof John Carlin.

Project Director: Dr Sheryl Hemphill, Analyst: Dr Tracy Whipp.

Aims of IYDS

- To compare the prevalence of substance use and related problem behaviours; levels of risk and protective factors; and pathways of initiation, frequent use, and heavy use among youth in Washington and Victoria
- To test cross-national validity and reliability of survey measures of risk and protective factors
- To examine the effect of school policy and program differences (abstinence vs. harm minimisation) on adolescent substance use.

Study Design

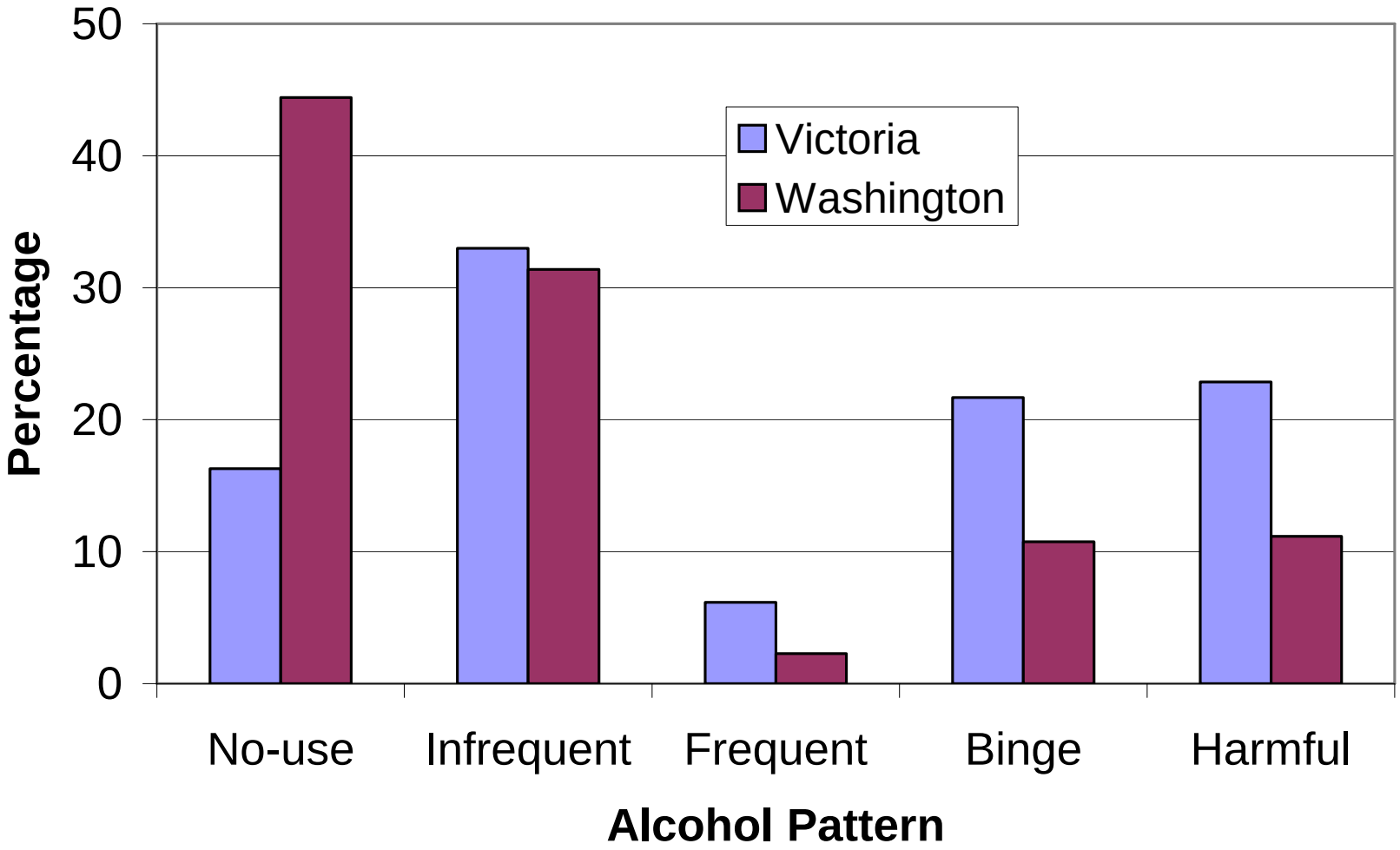
- Longitudinal student survey
  - Grade 5, 7 and 9
  - Two stage cluster sample
    - Random school sample
    - Random class within each school
- Pretest and pilot (2001)
- First wave (2002)
- Re-survey at 12 months (2003) and 24 months (2004)

Student Recruitment – Wave 1 in 2002

	Victoria (VIC)	Washington (WA)
Eligible sample (N)	3949	3859
Participation rate (%)	73.0	74.8
Final sample (N)	2884	2885

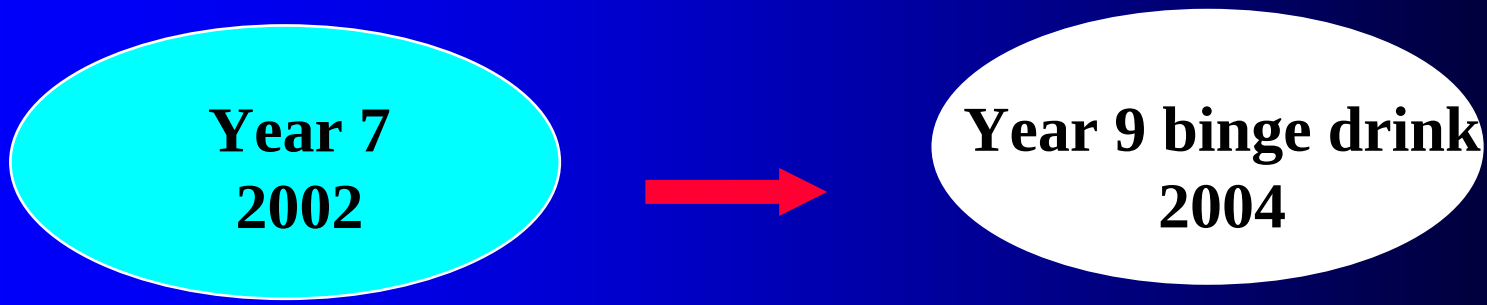
Retention W3 (2004) = 98%

Year 10 - Females



Predicting Year 9 binge drinking

(5+ drinks at least once in the previous fortnight)


Year 7
2002
Year 9 binge drink
2004

Year 9 binge drinking

	VICTORIA N=911			WASHINGTON N=921		
	OR	**95% - CI**	**p**	**OR**	**95% - CI**	**p**
Female	1.26	0.94 - 1.71	0.12	1.18	0.81 - 1.72	0.39
Higher Family SES	0.48	0.30 - 0.76	0.00	0.33	0.18 - 0.62	0.00
Early Alcohol Use	2.92	2.03 - 4.20	0.00	5.39	3.52 - 8.27	0.00

Year 9 binge drinking

Family Predictors	VICTORIA N=911				WASHINGTON N=921			
	OR	95% -	CI	p	OR	95% -	CI	p
Higher Family SES	0.47	0.29 -	0.74	0.00	0.46	0.23 -	0.92	0.03
Early Alcohol Use	1.44	0.98 -	2.14	0.07	2.53	1.55 -	4.13	0.00
Poor Management	1.58	1.09 -	2.29	0.02	1.11	0.74 -	1.67	0.60
Conflict	1.01	0.76 -	1.35	0.92	0.93	0.72 -	1.20	0.58
Antisocial Behaviour	1.55	1.23 -	1.95	0.00	1.76	1.38 -	2.26	0.00
Drug Behaviour	1.60	1.14 -	2.24	0.01	1.61	0.93 -	2.79	0.09
Antisocial Attitudes	1.10	0.76 -	1.58	0.61	1.02	0.63 -	1.65	0.93
Attachment Mother	1.04	0.72 -	1.51	0.84	1.15	0.82 -	1.63	0.41
Attachment Father	0.97	0.74 -	1.25	0.79	0.84	0.68 -	1.02	0.08
Rewards	1.00	0.79 -	1.27	0.99	0.88	0.66 -	1.16	0.35
Opportunities	0.96	0.63 -	1.46	0.86	1.06	0.71 -	1.59	0.78
Supervised Alcohol	1.35	1.20 -	1.51	0.00	1.29	1.06 -	1.58	0.01

Year 9 binge drinking

Community Predictors	VICTORIA N=911				WASHINGTON N=921			
	OR	95% -	CI	p	OR	95% -	CI	p
Higher Family SES	0.47	0.30 -	0.75	0.00	0.35	0.18 -	0.66	0.00
Early Alcohol Use	2.13	1.48 -	3.08	0.00	4.04	2.52 -	6.49	0.00
Low Attachment	1.07	0.82 -	1.39	0.62	1.26	0.96 -	1.66	0.09
Disorganisation	1.04	0.70 -	1.55	0.84	0.75	0.52 -	1.09	0.13
Mobility	1.01	0.77 -	1.34	0.93	1.20	0.88 -	1.65	0.24
Norms	1.36	1.07 -	1.71	0.01	0.96	0.72 -	1.28	0.77
Weak Enforcement	1.20	0.99 -	1.44	0.06	1.12	0.91 -	1.38	0.29
Availability of Drugs	1.41	1.12 -	1.78	0.00	1.39	1.10 -	1.76	0.01
Opportunities	0.85	0.65 -	1.12	0.25	0.88	0.62 -	1.24	0.45
Rewards	1.10	0.88 -	1.36	0.40	1.13	0.81 -	1.59	0.46

Year 9 binge drinking

School Predictors	VICTORIA N=911				WASHINGTON N=921			
	OR	95% -	CI	p	OR	95% -	CI	p
Higher Family SES	0.54	0.34 -	0.87	0.01	0.35	0.17 -	0.72	0.01
Early Alcohol Use	2.36	1.68 -	3.30	0.00	4.98	3.20 -	7.75	0.00
Academic Failure	1.29	0.96 -	1.75	0.09	1.33	0.99 -	1.80	0.06
Low Commitment	1.56	1.14 -	2.13	0.01	1.55	1.07 -	2.24	0.02
Opportunities	0.75	0.51 -	1.10	0.14	2.09	1.11 -	3.96	0.02
Rewards	1.02	0.74 -	1.39	0.92	0.62	0.45 -	0.85	0.00

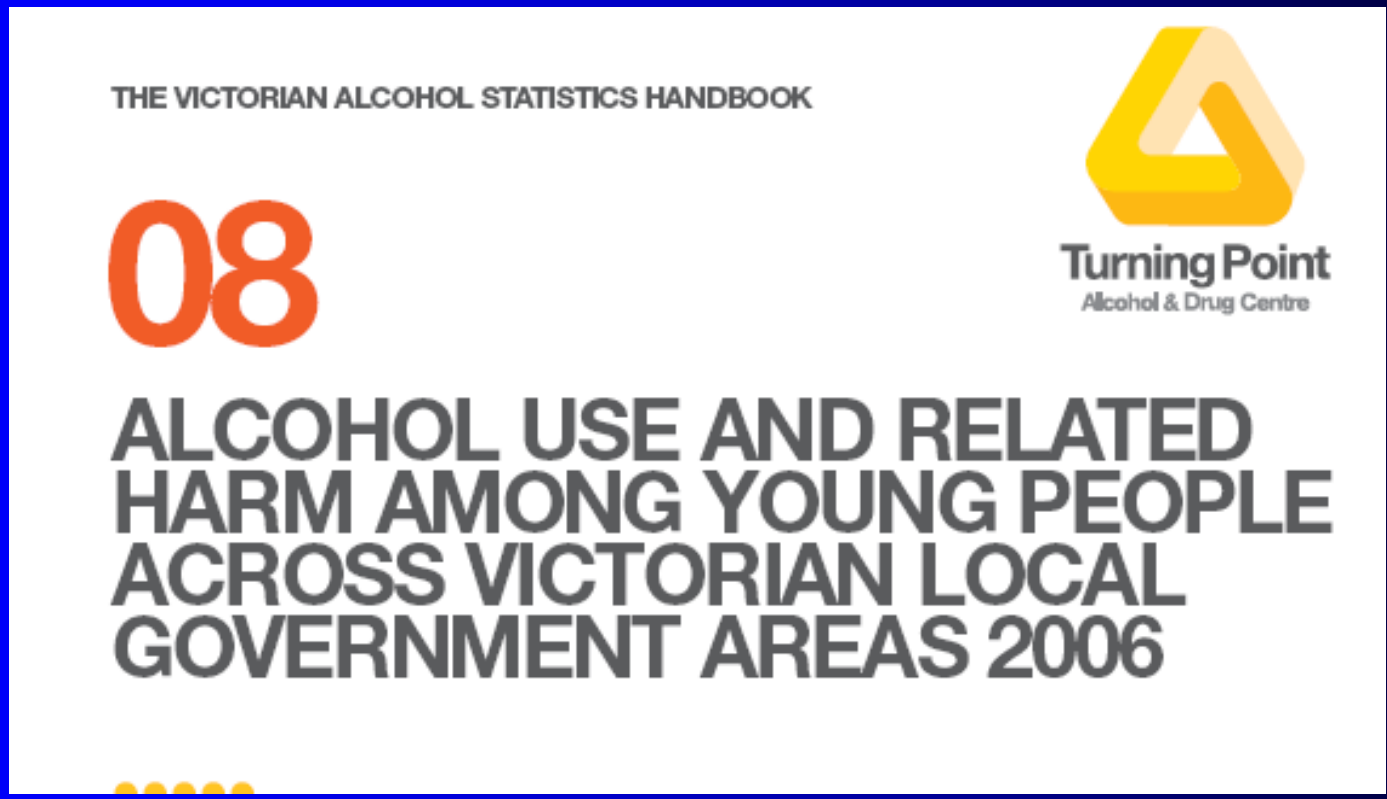
Year 9 binge drinking

Peer Predictors	VICTORIA N=911				WASHINGTON N=921			
	OR	95% -	CI	p	OR	95% -	CI	p
Higher Family SES	0.48	0.31 -	0.76	0.00	0.37	0.19 -	0.72	0.00
Early Alcohol Use	1.93	1.33 -	2.81	0.00	3.44	2.11 -	5.62	0.00
Antisocial	1.17	0.66 -	2.08	0.58	0.79	0.43 -	1.46	0.44
Drug Use	1.92	1.45 -	2.56	0.00	1.93	1.38 -	2.69	0.00
Prosocial	1.08	0.88 -	1.32	0.47	1.07	0.90 -	1.27	0.45
Rewards	0.84	0.72 -	0.96	0.02	0.98	0.79 -	1.22	0.84

Year 9 binge drinking

Individual Predictors	VICTORIA N=911			WASHINGTON N=921		
	OR	95% - CI	p	OR	95% - CI	p
Higher Family SES	0.49	0.30 - 0.79	0.00	0.38	0.20 - 0.72	0.00
Early Alcohol Use	1.45	0.94 - 2.23	0.09	2.64	1.69 - 4.12	0.00
Rebelliousness	1.27	0.92 - 1.75	0.14	1.11	0.79 - 1.57	0.53
Antisocial Attitudes	0.76	0.49 - 1.19	0.23	0.66	0.39 - 1.12	0.12
Drug Use Attitudes	2.89	1.78 - 4.72	0.00	2.06	1.22 - 3.47	0.01
Sensation Seeking	1.18	1.01 - 1.39	0.04	1.15	0.96 - 1.38	0.12
Antisocial Rewards	0.92	0.79 - 1.08	0.32	0.85	0.67 - 1.07	0.15
Religiosity	0.82	0.70 - 0.97	0.02	0.85	0.72 - 1.01	0.06
Social Skills	0.71	0.48 - 1.04	0.08	0.73	0.50 - 1.05	0.09
Emotional Control	1.05	0.81 - 1.35	0.71	0.87	0.61 - 1.23	0.41
Antisocial Behaviour	1.01	0.35 - 2.91	0.99	1.52	0.78 - 2.98	0.22
Housework	0.85	0.70 - 1.04	0.11	1.00	0.76 - 1.30	0.98

Does the survey predict area-level measures of alcohol-related harm?



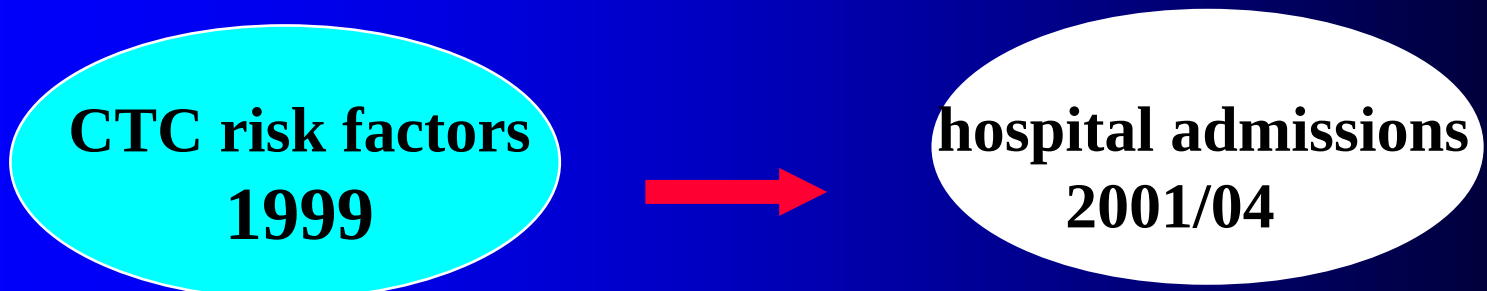
Laslett, A-M., Matthews, S.M. & Dietze, P. (2006).

Table 12 Summary table of SEIFA score, drinking pattern, rate of licensed premises and alcohol-related problems among young people, Victorian regions, 2000–2004

Region	SEIFA score (2001)	VYADS % risky & high risk drinking 16-24 yrs (2004)	Licensed premises per 10,000 15-24 yrs (2006)	Assaults 18–24 yrs (2001/04)	Family incidents 18–24 yrs (2001/04)	Serious road injuries 18–24 yrs (2001/04)	Hospital admissions 15–19 yrs (2001/04)	Hospital admissions 20–24 yrs (2001/04)	Deaths 15–24yrs (2001/04)
Barwon–South Western	970.52	82.3 +	315.85 +	36.60 +	21.60 +	8.65	45.98 +	58.41 +	0.91
Grampians	959.86	78.5	380.81 +	41.65 +	29.80 +	12.36	34.64	40.72	0.98
Loddon Mallee	954.38	68.9	395.48 +	38.70 +	35.95 +	11.18	35.42	48.75	1.06
Hume	959.34	85.0 +	508.12 +	42.48 +	38.65 +	11.53	44.81 +	53.37	1.05
Gippsland	947.65	81.3	379.68 +	53.99 +	37.16 +	11.81	43.15	53.73	0.99
North & West Metropolitan	1,008.24 /997.40	73.5/ 74.3	218.76 −	23.73 −	13.31 −	8.55 −	40.54	40.83 −	0.60
Eastern Metropolitan	1,074.80	73.5	185.18 −	22.83 −	10.74 −	9.82	34.23 −	42.58 −	0.50
Southern Metropolitan	1,030.98	77.3	234.93 −	26.64	18.20	10.74	41.47	52.43 +	0.78
Victoria	1,012.03	76.4	254.46	28.59	16.40	9.88	38.69	46.27	0.72

Sources are the same as identified previously.

Laslett, A-M., Matthews, S.M. & Dietze, P. (2006).


CTC risk factors
1999
hospital admissions
2001/04

Alcohol-related hospital admissions 2001/04

```
 Mixed-effects REML regression                   Number of obs      =      8247

                                                 Wald chi2(4)       =   1811.87
Log restricted-likelihood = -26474.967           Prob > chi2        =    0.0000

------------------------------------------------------------------------------
       hospad |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
    seifa2001 |  -.0322589   .0009524   -33.87   0.000    -.0341257   -.0303921
       licenp |   .0117764    .000422    27.90   0.000     .0109492    .0126035
      alcfreq |   .0002868   .0150782     0.02   0.985    -.0292659    .0298394
    1999 risk |   1.165462   .2106922     5.53   0.000     .7525127    1.578411
        _cons |   68.24016   .9720611    70.20   0.000     66.33495    70.14536
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Conclusions Validity

- IYDS helped to focus high rates of underage alcohol use & harm as a prevention issue in Australia

CTC Youth survey

- identifies individual predictors of Year 9 binge drinking in different settings –similar to the USA explains ~ 20% variance
- predicts area-level hospital admissions
- prediction appears independent of alternative prevention targets such as SES and alcohol sales regulation