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Australian Government
Department of Health
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THE UNIVERSITY OF
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Matilda Centre



Acknowledgement of country

I'd like to begin by acknowledging the Traditional Custodians of Country throughout Australia and their connections to land, water and community. I am currently on the land of the Gadigal people of the Eora Nation and pay my respects to Elders, past and present. I further acknowledge the Traditional Owners of the land on which you are and pay my respects to their Elders, past and present.

I would also like to acknowledge any Aboriginal and Torres Strait Islander people joining us for the webinar today.



Housekeeping

1 Listen only mode.

2 This webinar is being recorded and will be made available on the Positive Choices website.

3 We will have a Q&A session at the end of the webinar. Please add questions to the Q&A box available.



What is Positive Choices?

positivechoices.org.au



Teachers & Schools

Evidence-based teaching programs and activities, webinars for teachers, and resources for your students



Parents & Families

Parenting advice and information to help you talk to your children about drugs and alcohol



Students

Facts, advice and interactive tools to help you find out information about drugs and alcohol and make positive choices



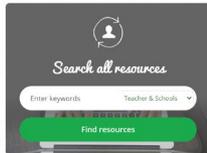
Culturally & Linguistically Diverse Peoples

Evidence based drug education resources for individuals from culturally and linguistically diverse communities



Aboriginal & Torres Strait Islander Peoples

A collection of culturally appropriate resources based on research and consultation with people from Aboriginal and Torres Strait Islander communities



- Central access point for trustworthy, up-to-date drug and alcohol information and educational resources.
- Developed by the Matilda Centre in consultation with teachers, parents and students. Funded by Australian Government Department of Health and Aged Care.
- Learning resources, factsheets, videos, webinars and games to engage young people with drug education.
- Access to classroom-based drug prevention programs that are proven to reduced drug-related harms.



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Declines in youth drinking

An unexpected development

Dr Michael Livingston, Associate Professor at the National Drug Research Institute (NDRI), Curtin University

16th November 2022



positivechoices.org.au

Questions?

Audio Settings ^

Chat

Raise Hand

Q&A

Leave Meeting

Declines in youth drinking: an unexpected development

Michael Livingston

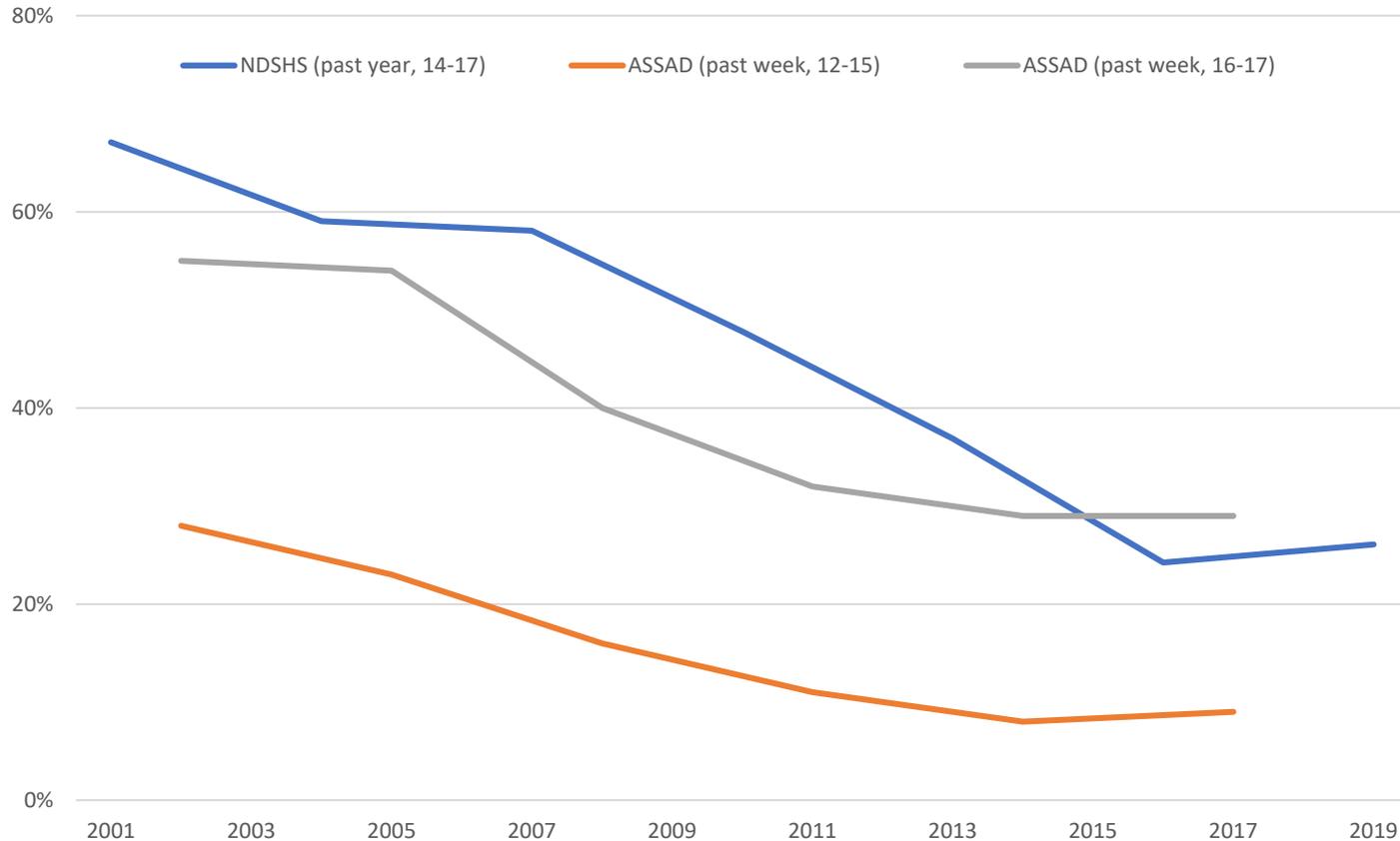
Acknowledgements

- I'm presenting work from colleagues and students that I've worked in collaboration with for the past five years on this topic
 - Sarah Callinan, Amy Pennay, Rakhi Vashishtha, Gabe Caluzzi (La Trobe)
 - Paul Dietze (NDRI/Burnet)
 - John Holmes, Melissa Oldham (Sheffield)
 - Jonas Raninen (Karolinska)
- Work has been funded by:
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Youth drinking

- Alcohol consumption by young people has been normative in high income countries for decades
 - In the 1999 ESPAD survey, over 90% of 15-16 year olds had consumed alcohol in 15/30 countries, drunkenness was relatively common
 - Similar data from outside Europe – e.g. ~50% of 16-17 year old Australians in 1999 were current (past 30 days) drinkers
 - Trends were generally increasing up to about 2000
 - In the US, current drinking (~50%) and binge drinking (~30%) was relatively steady through the 1990s
- A major public health concern
 - E.g. the top 3 contributors to deaths and disability in Australia for 15-24 year olds in 2011 were: suicide and self-harm, alcohol dependence, traffic accidents
 - Alcohol intoxication during teenage years linked to drinking problems in adulthood

Australia



The USA

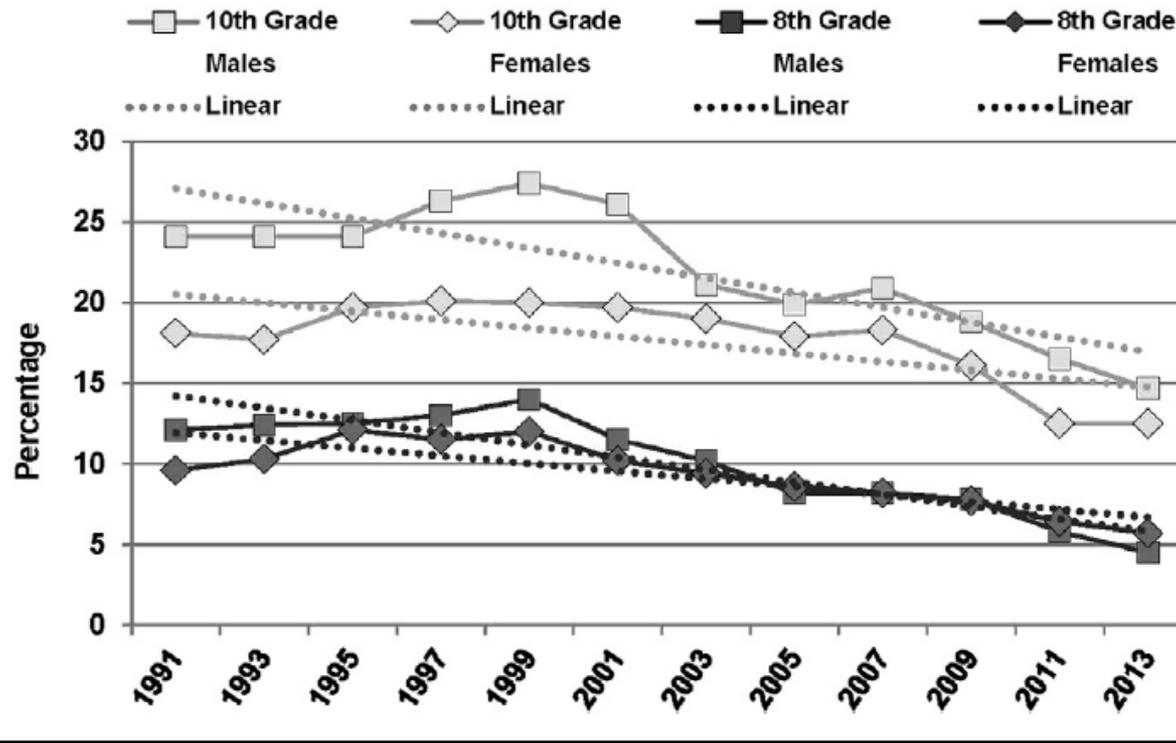


Figure 1. Rates of binge drinking in the past 2 weeks among male and female eighth- and tenth-graders.¹

Source: Harding et al., 2016, Underage Drinking A Review of Trends and Prevention Strategies, *Am J Prev Med*

The UK

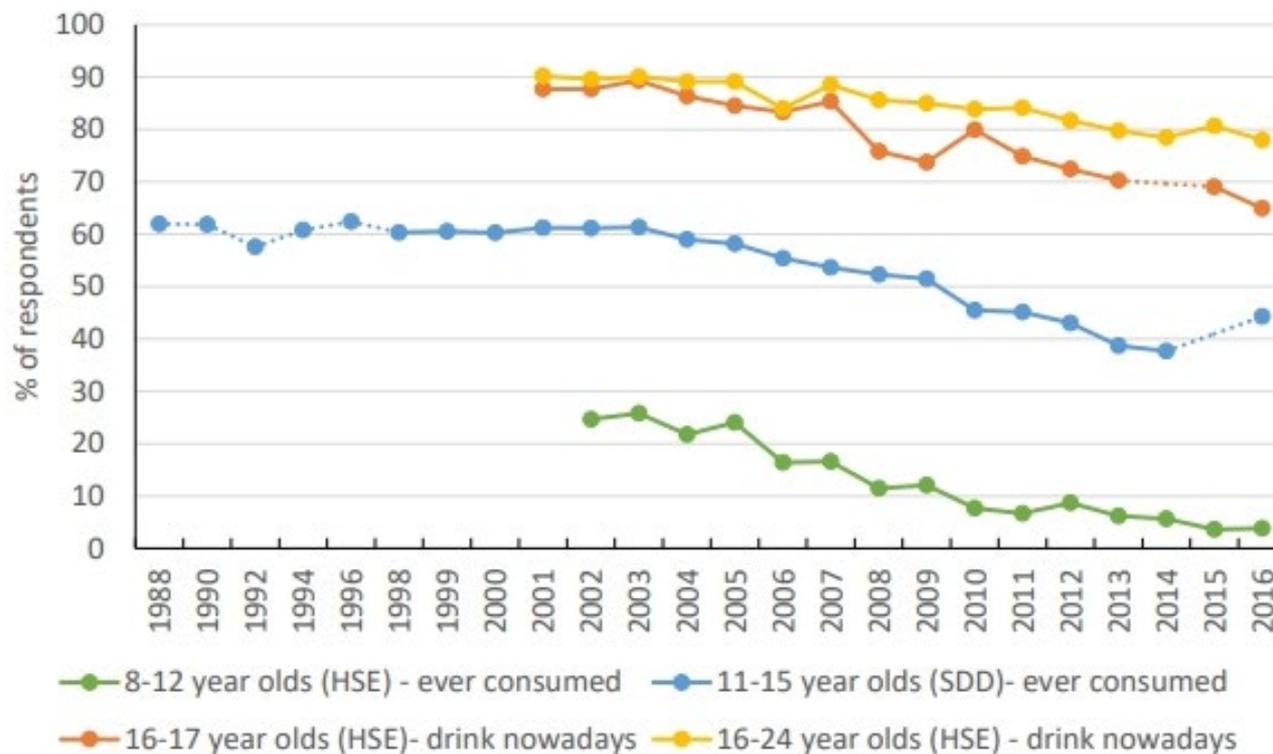


Figure 1: Proportion of 8-15 year-olds who have ever drunk alcohol and of 16-24 year-olds who drink nowadays by survey year.

Source: Oldham et al., 2018, Youth Drinking in Decline

The Nordic countries

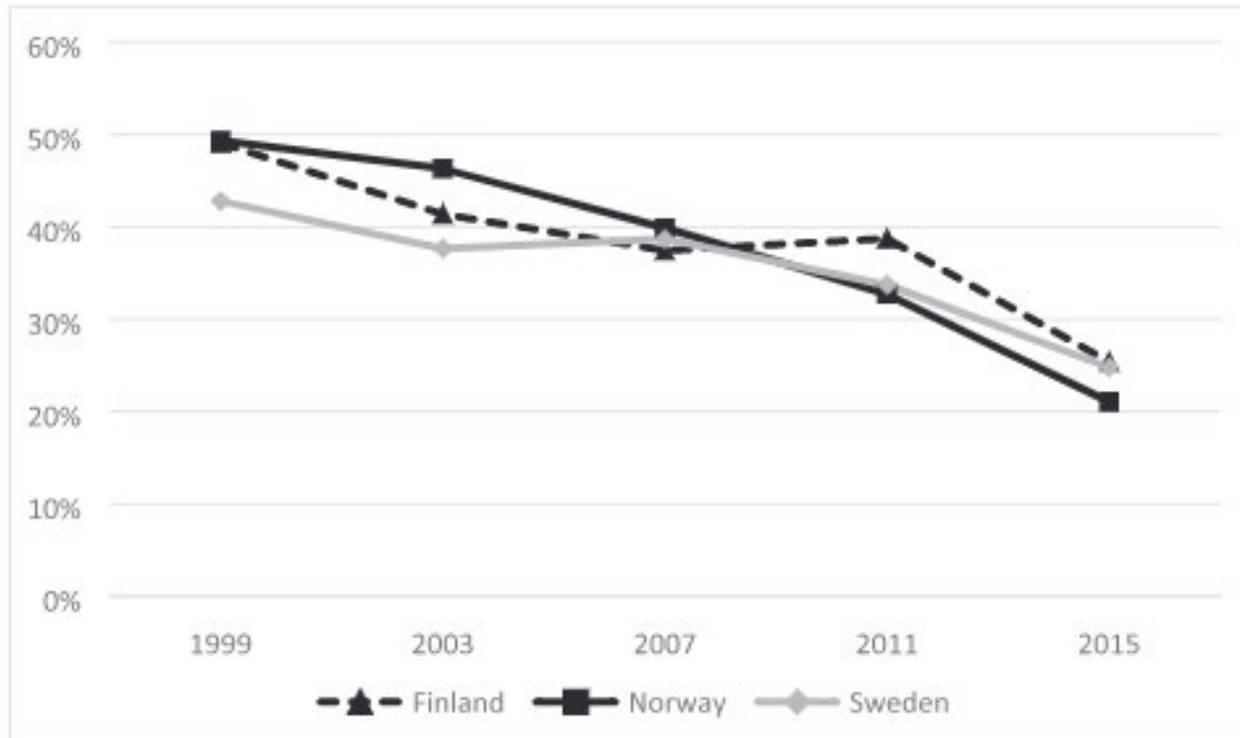
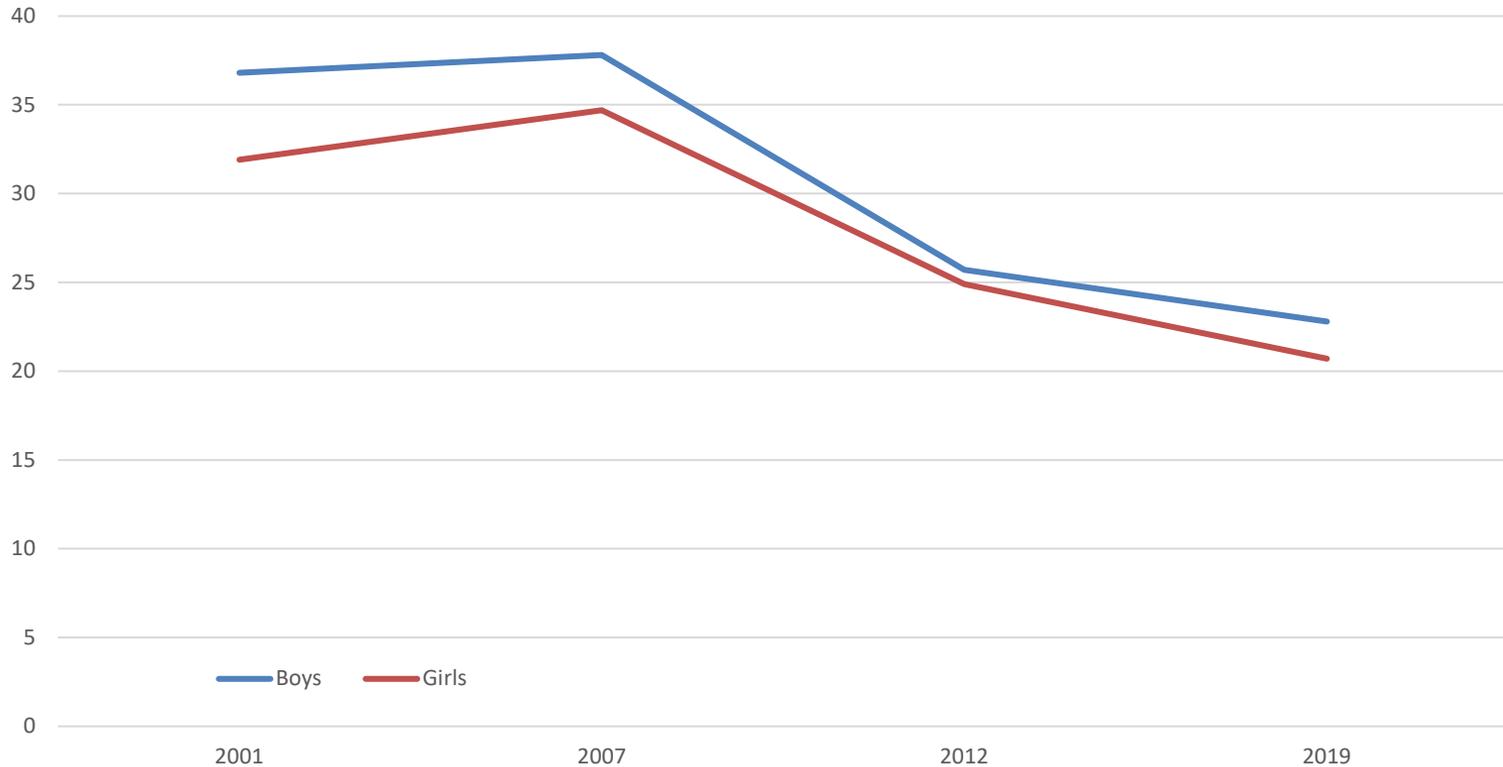


Figure 1 The proportion of adolescents drinking at least 5/6 drinks per occasion at least once a month (HED) in Finland, Norway and Sweden, 1999–2015

Source: Raitasalo et al., 2020 Similar countries, similar factors? Studying the decline of heavy episodic drinking in adolescents in Finland, Norway and Sweden, *Addiction*

New Zealand

Past-month heavy episodic drinking, high school students

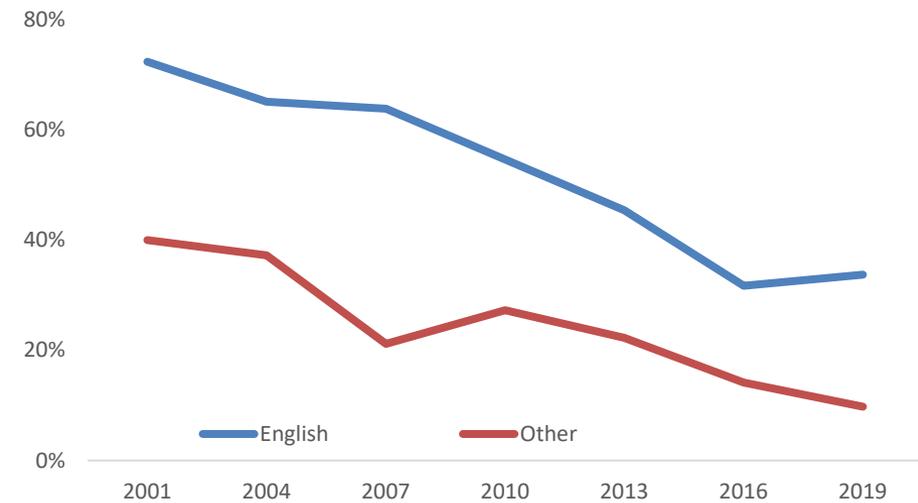
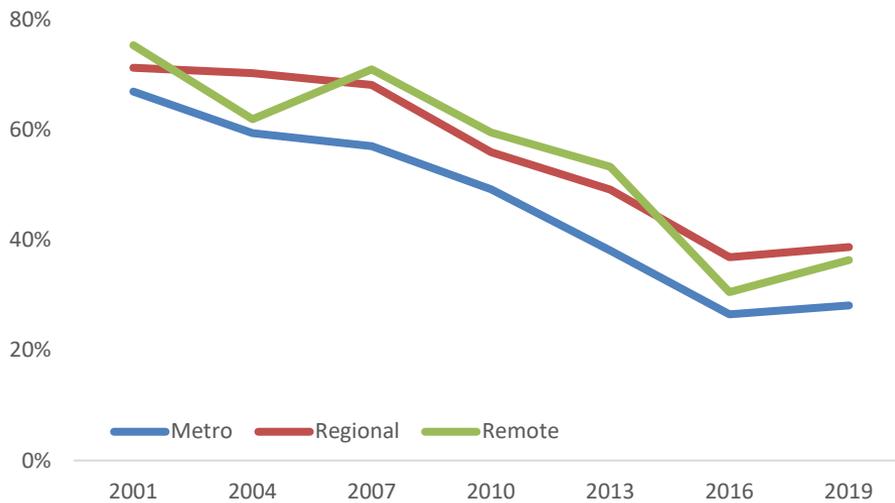
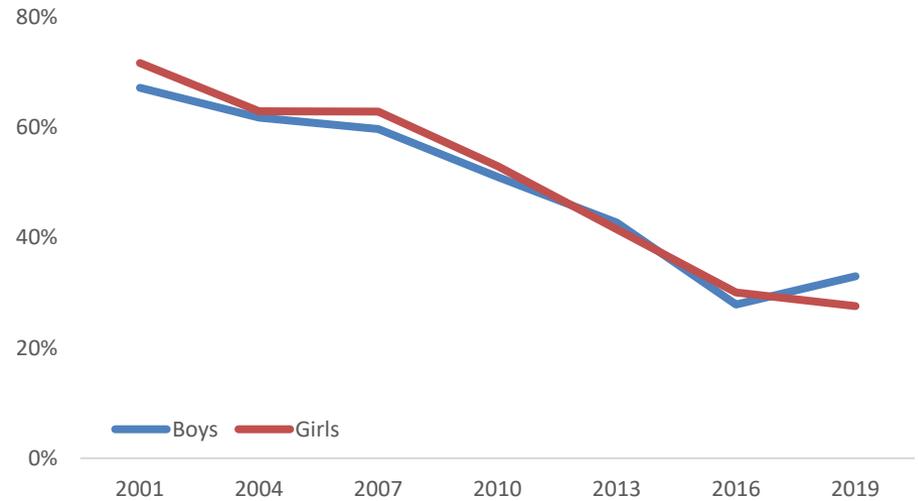
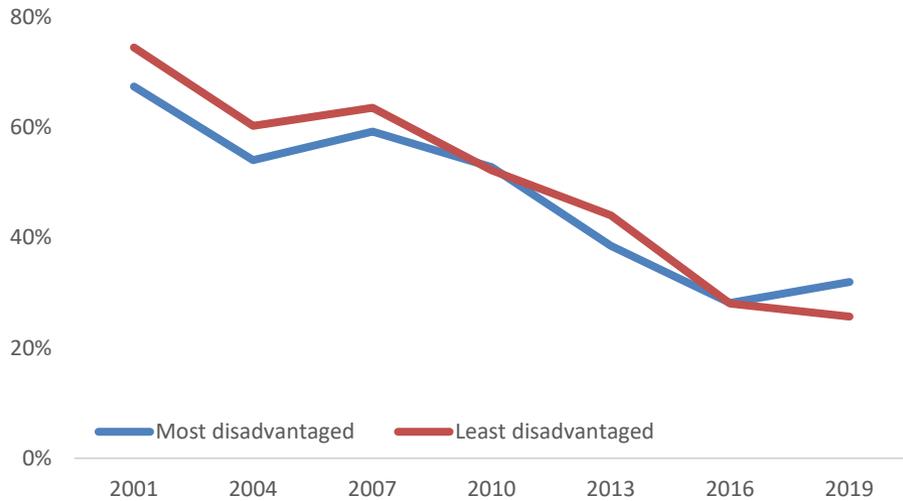


Source: Youth2000 survey data

Etc etc etc

- Recent study (Vashishtha et al., 2020, European Journal of Public Health) looked at data from 40 countries or territories
 - Declines were identified in nearly every country, although there were marked differences in the magnitude and timing of the shifts
 - Declines started earliest and have been steepest in Northern Europe, North America and countries with Anglo drinking cultures (UK/Ireland/Australia/NZ)
 - In many countries, teen drinking had fallen by >40% from its peak (USA, UK, Australia, Ireland, Guam, Lithuania, Switzerland, Netherlands, Sweden, Greenland, Norway, Iceland, Finland)
 - Much later and smaller shifts in Eastern and Southern Europe
 - Declines seem broadly consistent across measures (e.g. any drinking, recent drinking, binge drinking)

Declines have occurred across key groups



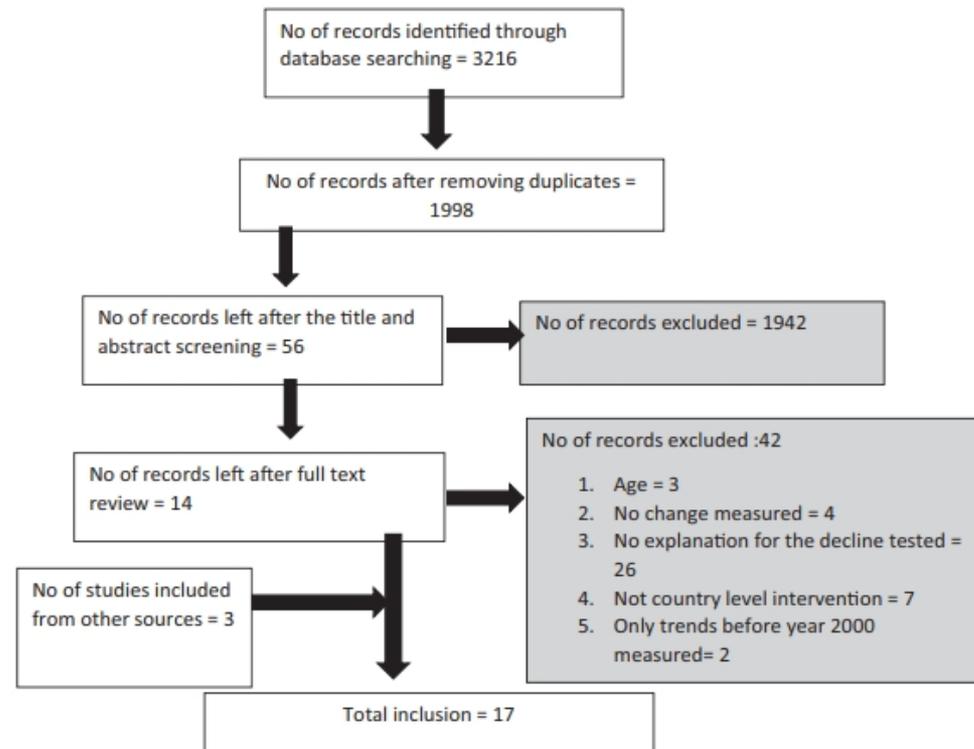
Adapted from: Livingston, M. (2014) Trends in non-drinking amongst Australian adolescents. *Addiction*, 109(6):922-929.

The key question: why?

- A growing field of research aiming to understand these trends, with lots of potential explanations put forward
 - Substitution to other substances
 - Changing family dynamics ('helicopter parents', small generation gap)
 - Shifts in attitudes to alcohol (parents and/or kids – potential reaction against previous heavy drinking cohorts)
 - Increasing focus on health and fitness
 - Changing patterns of leisure (e.g. online socialising)
 - Policy changes
 - Something else?

Why has youth drinking declined?

- Systematic review in late 2018 (Vashishtha, Livingston et al, 2020, Addiction Research and Theory)



Why has youth drinking declined?

- The seventeen studies looked at parenting (5), policy (5), substitution to other substances (3), economic effects (2), demographic shifts (1) and shifts in leisure activities (1)
 - Parenting studies looked at a wide range of measures (parental control/supervision, alcohol-specific parenting, communication) and generally found some associations
 - Policy impacts were generally small and specific – unlikely to have driven global shifts
 - Substitution evidence was basically non-existent
 - Econometric studies suggested that youth drinking *increases* during economic crises (e.g. GFC in 2008)
 - Studies were generally focussed within single countries, reducing their explanatory power

Why has youth drinking declined?

- Rakhi recently re-ran the search, finding 10 more papers
 - Evidence for parental factors (e.g. reductions in supply)
 - More evidence that computer-based activities have not been key (although reductions in face-to-face socialising was important in two studies)
 - A few studies point to peer factors as important – perhaps declines in drinking have a kind of momentum?
 - No evidence of substitution being important, little evidence for policy impacts (e.g. one study showed no relationship between price changes and youth drinking)
 - Literature largely Nordic, although increasingly multi-country data is being used
 - Almost no US studies, aside from Jean Twenge's work which points to declines in 'adult behaviour' broadly among US adolescents (dating, sex, working, driving etc)

Our project

- Mixed methods study focussed on trying to understand declines in Australian drinking
 - Inevitably used international data in some of the quantitative studies
 - Qual data collection from 50 light or non-drinking late teenagers
 - Ongoing collaborative work with teams in Sweden and the UK
 - Key areas to explore included:
 - Parenting
 - Increasing focus on health and fitness
 - Changing patterns of leisure (e.g. online socialising)
 - Policy changes
 - Cultural position of alcohol
 - Work led by Rakhi Vashishtha (quant) and Gabriel Caluzzi (qual)

Study 1 - What else has changed?

- Interested in whether the alcohol trends were linked to any other behavioural changes
 - Substitution to illicit drug use
 - Broader shifts in health behaviours reflecting increasing attention to health and wellbeing
 - Risky/impulsive behaviours more broadly (e.g. European study identified similar declines in fights at school)
 - Mental health, stress etc
 - Partly inspired by Twenge's US thesis, although data on 'adult behaviours' hard to consistently collate here

Study 1 - What else has changed?

Drug and Alcohol REVIEW



Drug and Alcohol Review (2021)
DOI: 10.1111/dar.13269

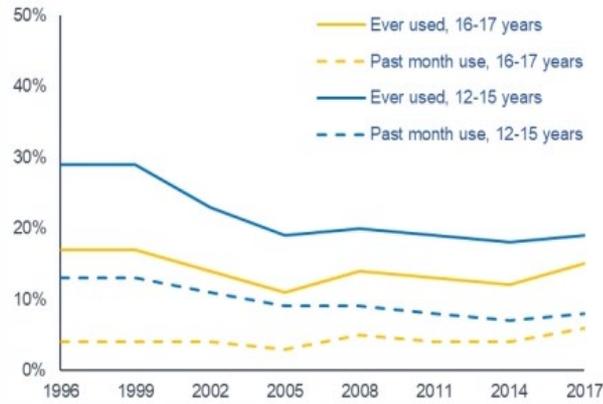
Trends in adolescent alcohol and other risky health- and school-related behaviours and outcomes in Australia

RAKHI VASHISHTHA^{1,2} , AMY PENNAY¹ , PAUL M. DIETZE^{3,4,5}  &
MICHAEL LIVINGSTON^{1,3,6} 

- Mixed findings

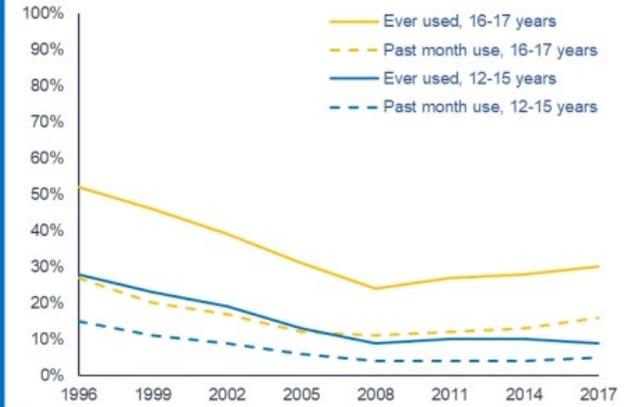
- Clear declines in illicit and in most risk behaviours (crime, driving-related, etc)
- No real indication that ‘health’ more broadly has shifted (e.g. diet, exercise)
- Some suggestions of increases in mental health problems
- No obvious shifts in school retention or employment (i.e. avoiding adulthood)
- Some areas not included (driving, moving out of home etc) have shifted as per Twenge’s thesis, but feel at least partly driven by structural factors

Inhalants



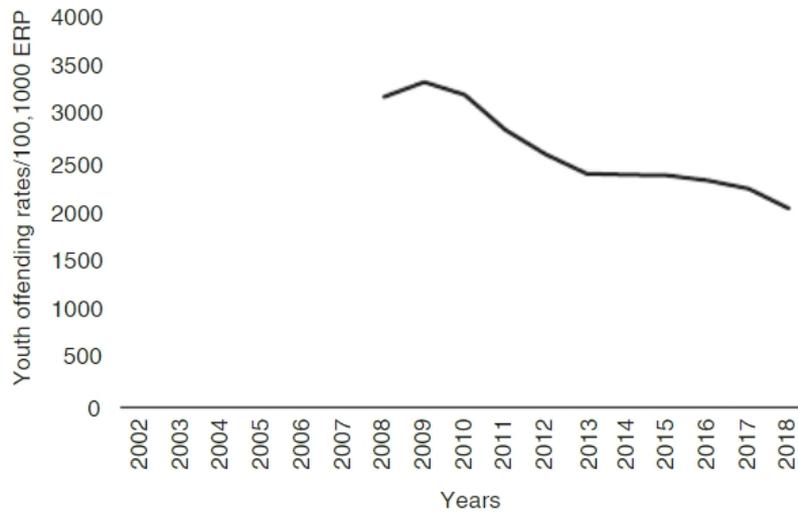
Percentage of Australian secondary school students who used inhalants, ASSAD 1996-2017

Cannabis

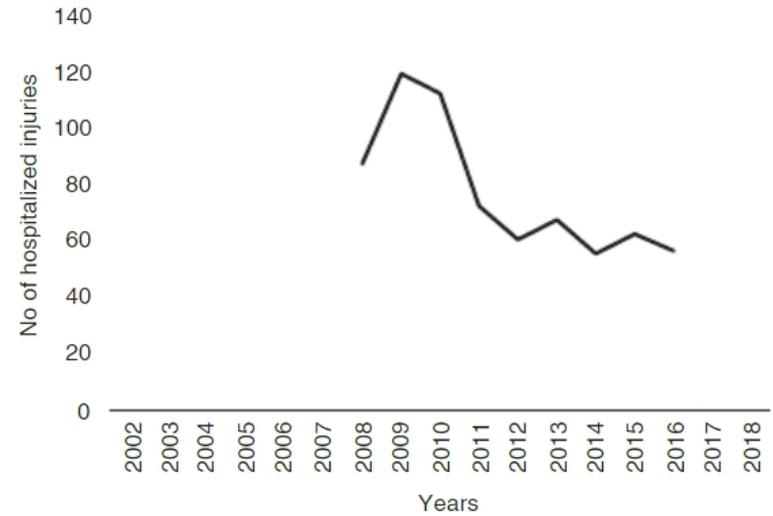


Percentage of Australian secondary school students who used cannabis, ASSAD 1996-2017

Trends in youth offending rates¹



Trends in the number of hospitalisation injuries of underage drivers²



Study 2 - What about policy?

- Alcopops tax in 2008 potentially contributed to declines
 - Although trends were heading down well before 2008
- Secondary supply laws another potential driver
 - Some reasonable evidence that patterns of supply have changed (e.g. parents are less common sources of alcohol than they used to be)
 - Convenient implementation pattern across different states meant we could attempt to pin down any impacts on consumption
 - Modelled impacts on any drinking, parental supply of alcohol and drinking frequency
 - No significant effects on any outcome measure
 - Policies likely reflect the changing landscape of youth drinking rather than drive it

Vashishtha, R., Pennay, A., Dietze, P., Livingston, M. (2021). Exploring the impact of secondary supply laws on adolescent drinking trends in Australia. *Journal of Studies on Alcohol and Drugs*. 82(1): 76-83.

Cross-national analyses

- International trends mean that looking outside a single country likely to provide more useful results
- Hard to find comparable cross-national data for Australian surveys
- Instead, making use of European School Survey Project on Alcohol and Other Drugs (ESPAD) data
 - Long-running data collection from 15 year-olds in ~35 European countries, every four years since 1995
 - Detailed consumption question, but *also* useful data collection on a range of potential explanatory factors
 - Surprisingly straightforward access to data for research
 - Presents significant analytical challenges (students nested within schools nested within countries nested within years, focussing on change over time)

Study 3 -effects of parenting

- Some reasonably robust international evidence that parenting practices have changed
 - Reduced supply of alcohol to adolescents (plus stricter rules around alcohol more generally)
 - Increases in relationship ‘quality’
 - Supervision levels increased
- Widely publicised concerns about alcohol and the developing brain coincide with declines
- Previous studies mostly report some impact of parenting practices on trends
 - Measures vary
 - Largely from single country studies
 - Little evidence they explain the declines completely

Study 3 -effects of parenting

- ESPAD data includes consistent items on parental control/supervision
 - E.g. ‘My parents know where I am in the evening’ (Almost always - Almost never)
- And on parental relationship quality
 - E.g. ‘I can easily get warmth and caring from my mother and/or father’ (Almost always - Almost never)
- Two summary measures (supervision and relationship quality)
 - Limit analyses to 2003-2015, 30 countries (based on data availability)
 - Outcome: past-month drinking
 - Models: multi-level regression models, with aggregated ‘within’ and ‘between’ measures of parenting scores to capture aggregate effects

Study 3 -effects of parenting

- At the individual level:
 - Higher levels of parental supervision -> lower levels of drinking
- At the aggregate level:
 - As parental relationship quality improves *within* a country, drinking declines
- Fully fitted model still had a substantial unexplained overall decline in drinking
 - Parenting matters
 - Some changes to parenting practices have contributed to declines in drinking
 - A long way from explaining the major declines observed

Vashishtha, R., Pennay, A., Dietze, P., Livingston, M. (in press). The role of parental control and support in declining adolescent drinking: A multi-level comparative study of 30 European countries. *Alcohol and Alcoholism*

Study 4 - Internet/gaming

- An obvious factor to consider
 - Rapid expansion of online/computer-based leisure activities roughly correspond with declines in drinking
 - Increasingly large proportion of adolescent social lives play out online
- Potential mechanisms
 - Simply taking up the *time* that was previously spent drinking
 - Replacing social events that centred around alcohol with alternative ways of interacting
- Few studies so far
 - At an individual level, results usually in the other direction (i.e. people who report more internet use also report more drinking)
 - Measures are poor or unstable across time

Study 4 - Internet/gaming

- ESPAD measures both internet use and gaming
 - Recent surveys have detailed and sophisticated items
 - Long-running time-series rely on relatively crude measures
 - How often do you use the internet for leisure activities (chats, music, social networks, games etc)?
 - How often do you play computer games?
 - Responses range from 'almost every day' to 'never'.
- We also incorporated objective measures of internet penetration
 - % of households with internet connections (from World Bank)
- Roughly the same data as the parenting paper
 - Country-years excluded where key items not collected
 - 31 countries with at least three waves of data between 2003 and 2015

Study 4 - Internet/gaming

- No significant association between changes in gaming/internet use and drinking
 - Measurement is fraught (the vast majority of kids reported ‘nearly every day’ by the final wave)
 - Hard to think through how to quantitatively assess the impact of these major social changes on alcohol use
 - Social media in particular is a crucial part of almost all social events young people engage in, so the simplistic idea of ‘substitution’ may not make any sense
 - Other factors to think through: how the internet/mobile phones have affected parental supervision; concerns about the distribution of embarrassing photos etc on social media; alcohol marketing online

Vashishtha, R., Pennay, A., Dietze, P., Livingston, M. (2021). An examination of the role of changes in country-level leisure time internet use and computer gaming on adolescent drinking in 33 European countries. *International Journal of Drug Policy*

Qualitative work

- Interviews with 50 late teenagers (16-19) in Melbourne
- Only abstainers or light drinkers (never >4 standard drinks) were included
- Semi-structured interviews making sure key topics were covered, but allowing conversation to proceed naturally
- Analysed thematically

Qualitative work

- Health comes through as a clear concern for light/non-drinking young people
 - *"I consider myself healthy. I don't drink, I don't smoke, I don't do any sort of drugs. I try to keep myself clean of all that stuff" – 17, M*
 - *"I don't even know what's in alcohol but I know it's not the best stuff for you and I would never - I know that no one associates alcohol with being in good health" – 17, F*
 - *"I'd probably try to not go very heavily on drinking, until I'm at least 21 or something, just because later on down the track, you don't know what's going to happen." – 16, M*
 - *"I know just from doing things at school and the media and parents or people that - especially at this stage, when your brain is still growing and developing, that it's terrible for your brain" – 16, M*

Qualitative work

- Clear arguments for the pleasures and authenticities of not drinking
 - *“I know it eases people's social anxieties and makes it easier to communicate and stuff, but I think that I'd rather be socialising with people as my true self if that makes sense, even if that includes the anxiety that comes with meeting new friends and stuff.” – 16, F*
 - *“It's really awesome just to meet new people that...that's what I like about parties. But it's just when people aren't themselves, it's really hard to talk to them or interact with them” – 17, M*
- Non-drinking friends seen as ‘real’, ‘more supportive’ and easier to forge genuine intimacies with
 - Fascinatingly similar to arguments made by heavy drinking teenagers elsewhere

Qualitative work

- Some indication that the ‘surveillance’ aspect of social media was a concern

*“I guess in older generations, without Snapchat and like media and on the news and stuff, it wasn't as - like you didn't see as much of the effects of it, and **all like the news about people dying with alcohol or being raped or whatever. Like when you're younger, now because of technology, you're a lot more open to the problems of the world and what's going on, and that includes like people getting hurt because of alcohol, or like people dying because of fights related to alcohol. It's - I might not focus on it, or not that much, but **subconsciously I soak it all in** that sometimes like **there's a limit and there's a safe way to do it and this can happen if I do this (...)** you got away with a lot more than we do now, because of also technology. **Like if someone posts you're drinking something and that gets to the wrong people, you get in trouble - and they never used to have that.**” (Kristy, 16 Female)***

Qualitative work

- Competing priorities/pressures
 - *At this stage of my life I've got too many important things going on to be waking up the next morning just feeling sick. That can wait until I've finished school and stuff like that. Do you know what I mean? Like you go out on a Saturday night and if you drink too much then you wake up Sunday and you're feeling sick then how are you going to study and do all the stuff that you have to do on Sunday? So it just seems a bit pointless to me at this point in time. (Lucy, 17, F)*
- Ongoing work to follow up this cohort now that they're 2-3 years older and to compare with similar qualitative data in the UK and Sweden

Caluzzi, G., MacLean, S., Livingston, M., Pennay, A. (2021). "No one associates alcohol with being in good health": Health as an imperative to manage alcohol use for young people. *Sociology of Health and Illness*. Online

So what do we know?

- Declines in youth drinking unlikely to have been driven by a single, neat cause
 - Parenting has likely contributed, although the specifics remain unclear
 - Broad social concern about alcohol appears to have increased and there is at least some evidence that health messages have permeated
 - More work needed to understand financial, social, career pressures (particularly to understand the contrasting mental health trends)
 - Evidence that the internet has been important is limited, but likely permeates most of the other explanations in some way
 - Increasing interest in the different global trajectories (e.g. Anglo & N. Europe vs the rest)

Where to from here?

- What happens to youth drinking as these cohorts age? Using cohort study data:

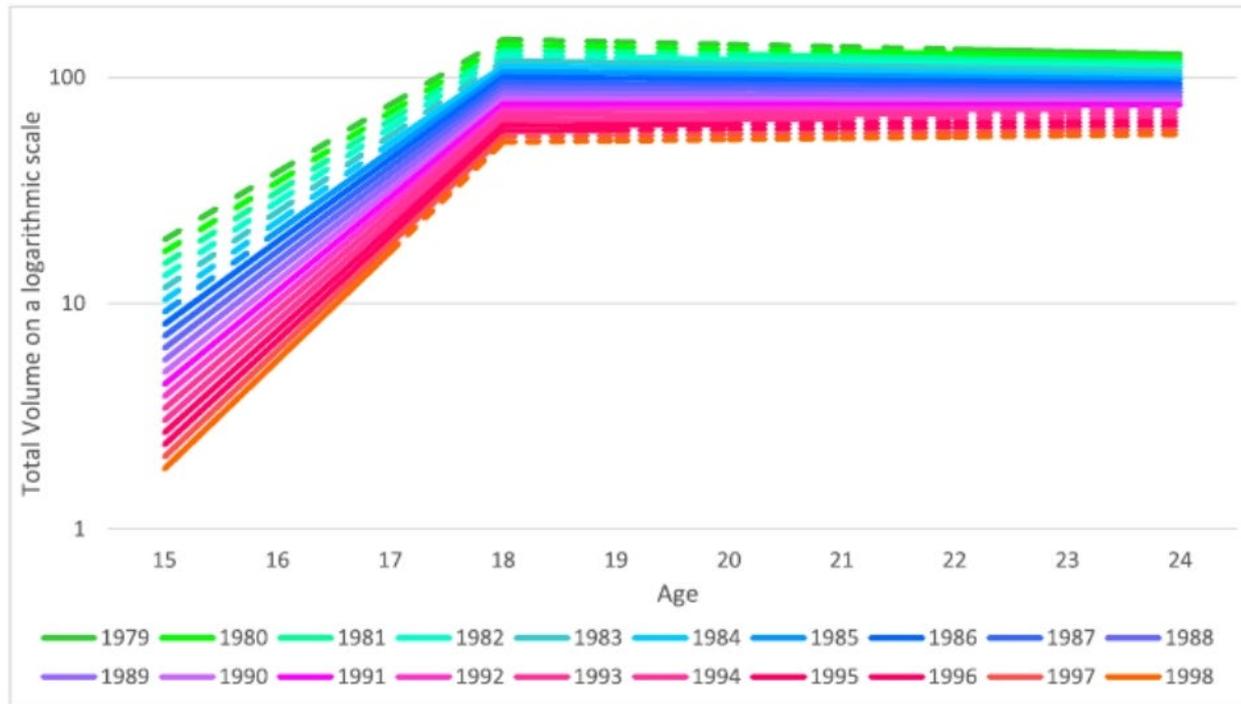
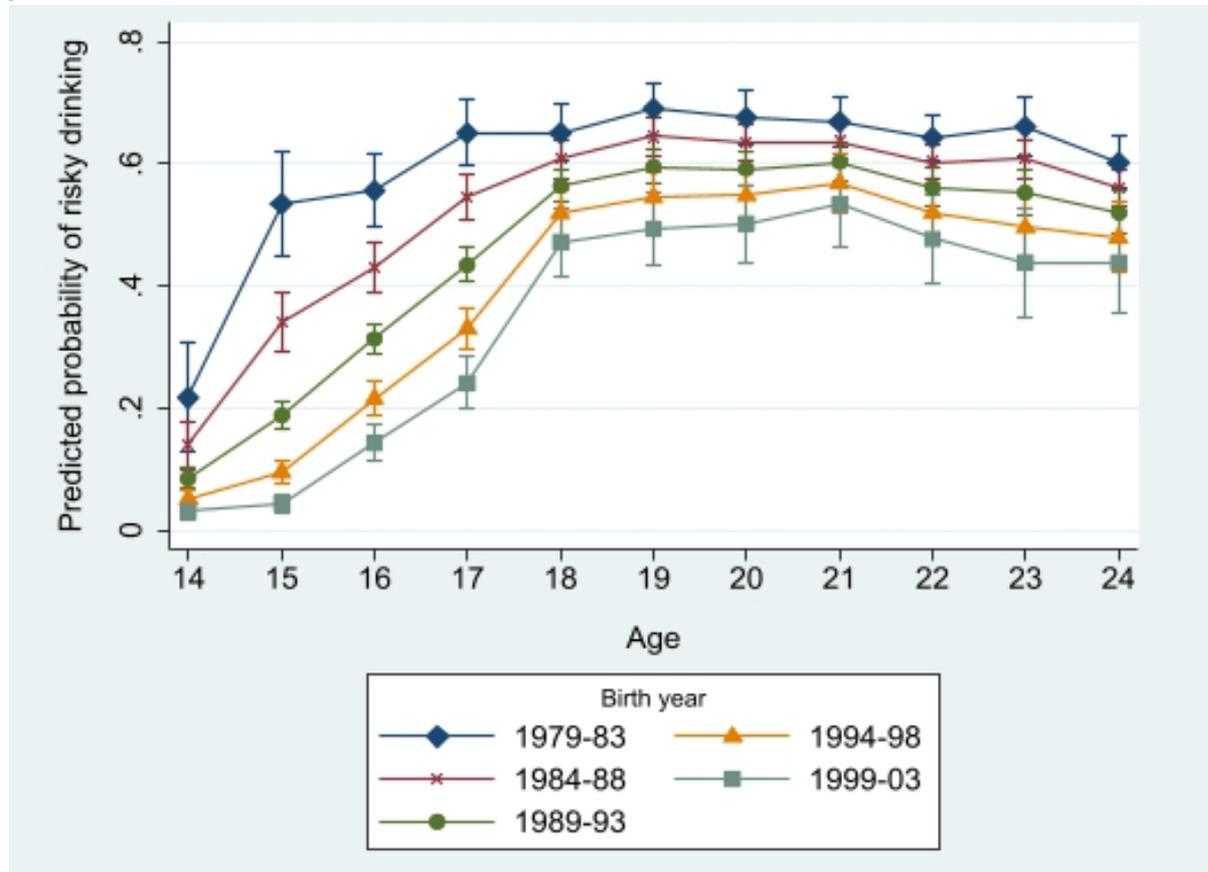


Figure 2 Predicted total volume of annual consumption in standard drinks by age and cohort, including abstainers.

Callinan, S., Pennay, A., Livingston, M., Kuntsche, E. (2020). Patterns of alcohol consumption in 16 cohorts of Australian young adults aged 15-24 between 2001 and 2016. *Addiction*. 115(8): 1452-1458

Where to from here?

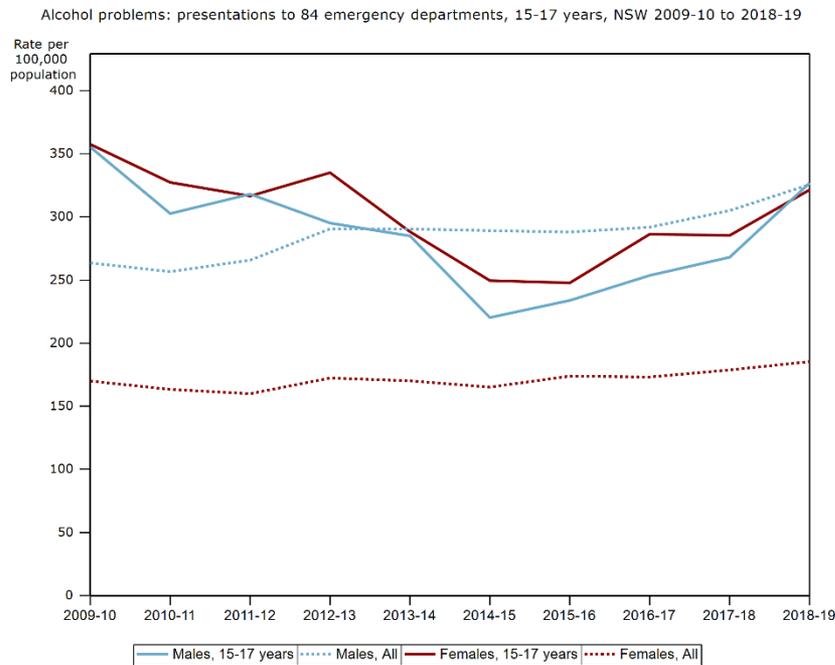
- Or repeated cross-sectional data



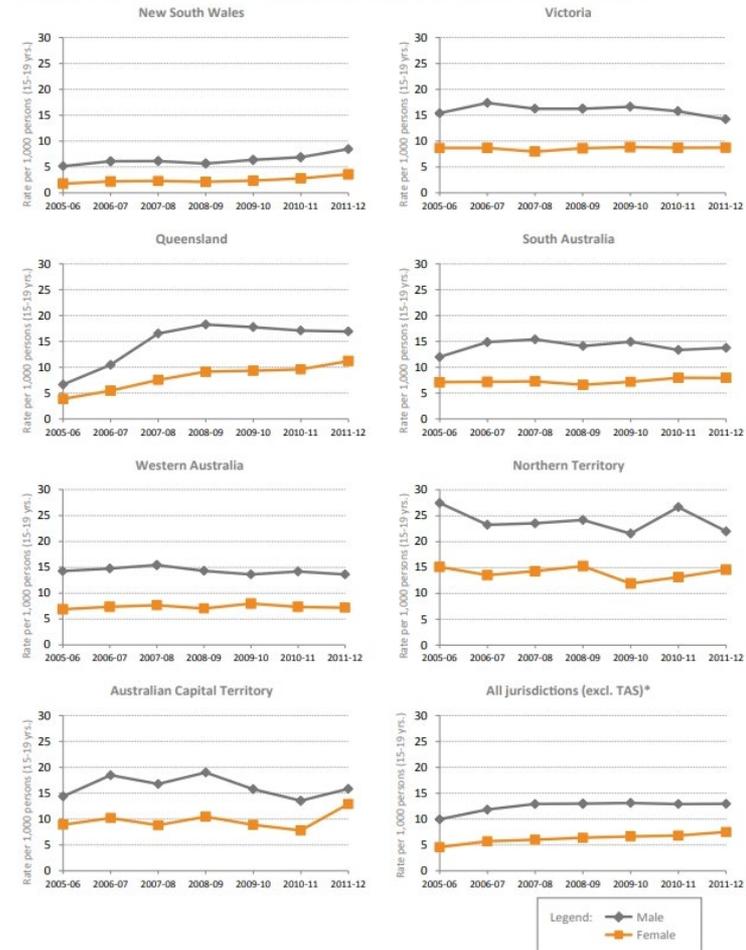
Livingston, Callinan, Vashistha, See Yuen, Dietze (2021), Tracking the decline in Australian adolescent drinking into adulthood. *Addiction*

Where to from here?

What does all this mean for harm?



Trends in teenage (15-19 years) alcohol-related injury presentations to EDs



Where to from here?

- Understanding differences and similarities internationally
 - Demographic differences not well understood internationally
 - Early examination of young adult drinking trends point to much less consistent patterns (Livingston & Vashishtha (2019))
 - In contrast to Australian data, some Finnish data points to teenage drinking declines dissipating by adulthood (Lintonen et al., 2016)
 - Harms data remain challenging to compare cross-nationally

Where to from here?

- Other key questions
 - What do these shifts mean for established models of longitudinal risk?
 - E.g. adolescent risk factors for alcohol problems in adulthood are mostly derived from studies where adolescent drinking is normative
 - Whose drinking has not declined? How do these trends influence social inequalities?
 - Are teenage drinkers becoming more marginalised as the behaviour becomes less normative?
 - Integrating broad cultural shifts with our models of policy impacts is crucial
 - Policy matters, but it's not the only thing that matters

Where to from here?

- And of course: Covid-19
 - Could reinforce declining drinking trends, or derail them
 - Early data on overall impacts on alcohol consumption is equivocal, with decent evidence that shifts have varied markedly between groups
 - Very little youth data (that I've seen)
 - Could lead to less drinking: home schooling, lockdowns, increased parental supervision, less peer-interaction
 - Or increased drinking: stress, boredom

Thank you

- A reminder, most of this work was done by:
 - Rakhi Vashishtha, Amy Pennay, Sarah Callinan, Gabe Caluzzi, Sarah MacLean
- Comments, questions, theories?

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Thank You

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