



Turning Point
Alcohol & Drug Centre

Australian alcohol guidelines: a research perspective

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Is It Time for a New Direction?” Premier’s Drug Prevention Council
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Medical guidelines on drinking: not a new idea

- **Anstie's Limit (1870):**
 - daily limit of 1½ oz. = 33½ gm. ethanol;
 - from “our own experimental researches,... about the limit of what can habitually be taken by persons leading a not very active life without provoking symptoms of chronic malaise”
 - = 3⅓ Australian standard drinks per day
 - = 23½ standard drinks per week
- ***How Much Is Too Much?* (Leonard Gross, 1983)**
 - A professional writer, interviews U.S. experts in the field:
 - Thresholds and risk curves vary for different illnesses
 - The book ends up as much about conflicting ideologies in the field as about the science
 - Experiments with his media-business friends at cocktail parties in New York
 - Making a nuisance of himself: “pour that one again for me, please, into this beaker”
 - Drinks poured at these occasions 2-3 times the U.S. presumed “drink” of 12 gm. alcohol

Official guidelines relatively recent

- First appear in mid-1980s
- 1st Australian Guidelines 1987, revised 1992
- More accepted some places than others: e.g.
 - U.S. agencies reluctant, guidelines not highly publicized
 - Canadian guidelines: more enthusiastic, a diversity
- **Hesitations** (David Hawks, *Brit. J. Addic.* 84:371-375, 1989)
 - “the qualifications which need to be associated with such advice would be forgotten”
 - Those drinking less may increase their consumption
- **Two sets of issues:**
 - Measuring actual risks, and how the guidelines should relate to them
 - The reception of the guidelines and their interpretation by those at risk

Varying terminology

- Safe drinking limits
- Sensible drinking
- Responsible drinking
- Responsible choices about drinking
 - To emphasise that not-drinking is an option
- Low-risk drinking
- “guidelines”? “recommendations”? “limits”?

Varying harms as targets: the current Australian guidelines

- Chronic health problems, “long-term risks”
- “Short-term risk of health and social problems”, including injury
- Dependence ← alcohol-free days & Gdl 4
- Inherited alcohol problems (Gdl 5)
- Foetal alcohol effects (Gdl 11)
- Illegal BAC limit (discussion of Gdl 2)

Intentions of guidelines

- **Guide to behaviour**
 - but “not specifically aimed at the general public”;
 - aimed at “health professionals, community groups, industry, professional organisations, school and educational organisations”
- **Knowledge → Attitude → Behavior paradigm**
 - Not a good model for change of normative & valued behaviours
- **But 2-step flow of communication**
 - How does that change the issue of effectiveness?
- **Possible adverse side-effects – any evidence?**
 - “drink up” to guideline? – many drink much less
 - normalising drinking & fairly heavy drinking – effects?

Other lives of the guidelines

- 1992 Australian guidelines → English et al. 1995 → low vs. medium vs. high risk thresholds
 - In WHO Global Burden of Disease calculations for alcohol
 - In Cost of Alcohol studies, e.g. in Sweden, Canada
- Only the Chronic/volume guidelines taken up
- Risks for acute problems (injury, social) measured otherwise (directly or Hazardous Drinking Score) because:
 - Obviously culturally specific
 - Medical epidemiological studies usually didn't measure
- What happens to these traditions if the volume guidelines change?

Character of the guidelines

- **numeric & specific:**
 - **Chronic/long-term health risks & benefits:**
 - Weekly cumulation, number of standard drinks
 - **Acute/risks of injury, acute health, social problems:**
 - Amount “on any one day” in standard drinks
 - Maximum drinking rate specified
 - **Dependence:**
 - Number of alcohol-free days per week
 - **Pregnancy & breast-feeding:**
 - Weekly and daily amounts
- **Non-numeric, unspecified: all other advice**
 - “substantially below Guideline 1”
 - “take particular care to stay within Guideline 1”
 - “...not possible, based on current evidence, to define precise drinking levels...”

The numeric foundation-stone

- Australia: standard drink – 10 gm ethanol
- U.K.: drink unit – 8 gm
- U.S.: “drink” – 12 gm in surveys
- Canada: “drink”, listed as 13.6 gm (really ~12?)
- In real life:
 - Much variation in drink sizes, % alcohol
 - “Units”, “standard drinks” likely to be interpreted in terms of real drinks?
 - Could easily result in guidelines being interpreted at twice the level (pint rather than half-pint for UK unit?)

Evidence base for the numeric guidelines: 1

- **Chronic: many studies, but:**
 - Always risk curves, rarely a threshold
 - Different risk-curves for different outcomes
 - Effect of pattern also for chronic diseases – e.g., cirrhosis?
 - What about subpopulations? (age, social class, ethnicity as well as gender)
 - Protective effects? Probably overestimated.
 - In principle a question of balancing, in practice not a big issue
- **Pregnancy & breastfeeding:**
 - Threshold for acceptable risk set lower?
 - Evidence base on lower limit or threshold of risk scanty
 - Little political will to collect it, e.g. in the U.S.?
- **Dependence and alcohol-free days**
 - Admittedly “limited”; a “prudent approach ... may help ...”

Evidence base for the numeric guidelines: 2

- Acute/amount per day: fewer studies than for chronic
 - Always risk-curves, rarely a threshold
 - Different risk-curves for different outcomes
 - “protective” effect of regular drinking?
 - Lower risk-curve for frequent drinkers in Grand Rapids Study
 - Differences by cultural group
 - Drunken comportment – MacAndrew & Edgerton
 - Difference by age: youth get in more trouble
 - Little difference, or paradoxical, by gender

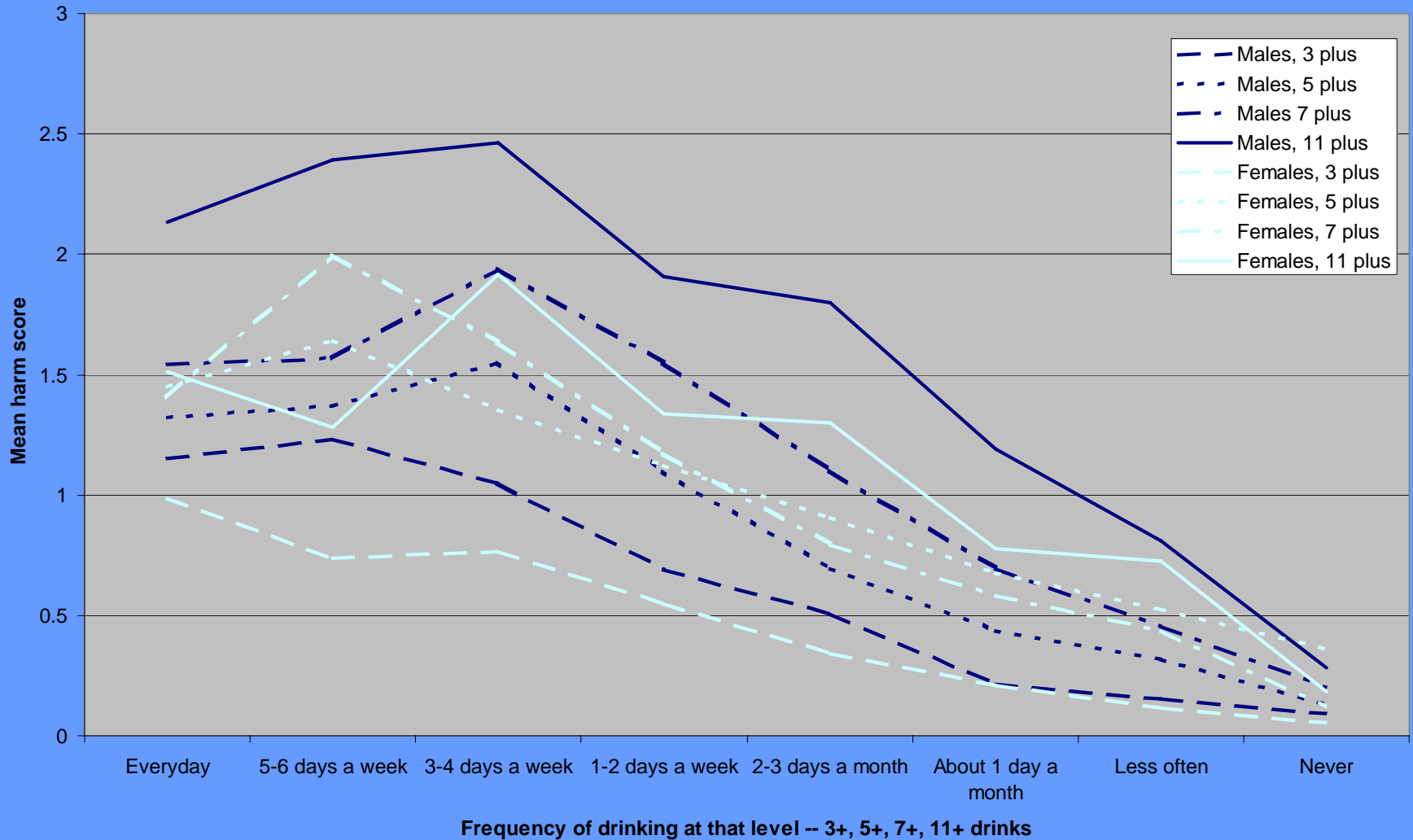
Australian numeric guidelines in international context

- Most provide only one threshold of “low risk” vs. risky
- Australian “low risk” guidelines
 - Higher than most (particularly for males)
 - e.g., Austria, Canada, Denmark, Finland, Ireland, Poland, Sweden, U.K., U.S.
 - Stronger gender differentiation than most
 - twofold for chronic, 1½-fold for acute
 - Pregnancy allowance higher than most
 - U.S., Sweden: “no drinking”; U.K: “1 or 2 per week”

Risk curves for drinking problems score, by frequency of exceeding acute drinking thresholds

National Drug Strategy Household Survey, 2004

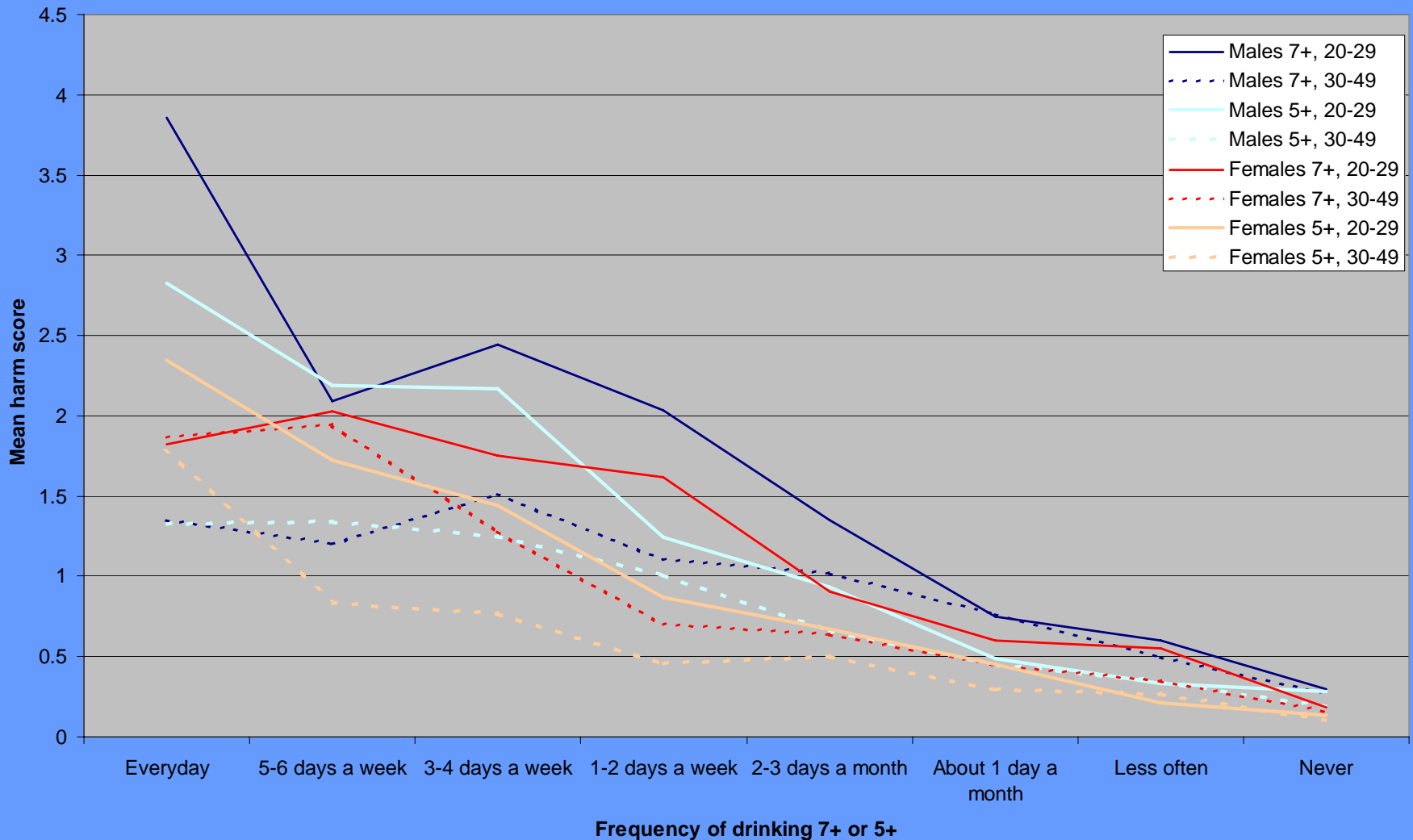
Mean harm score (10 items) by frequency at each threshold, males and females



Risk curves for drinking problems score, young and middle-aged adults

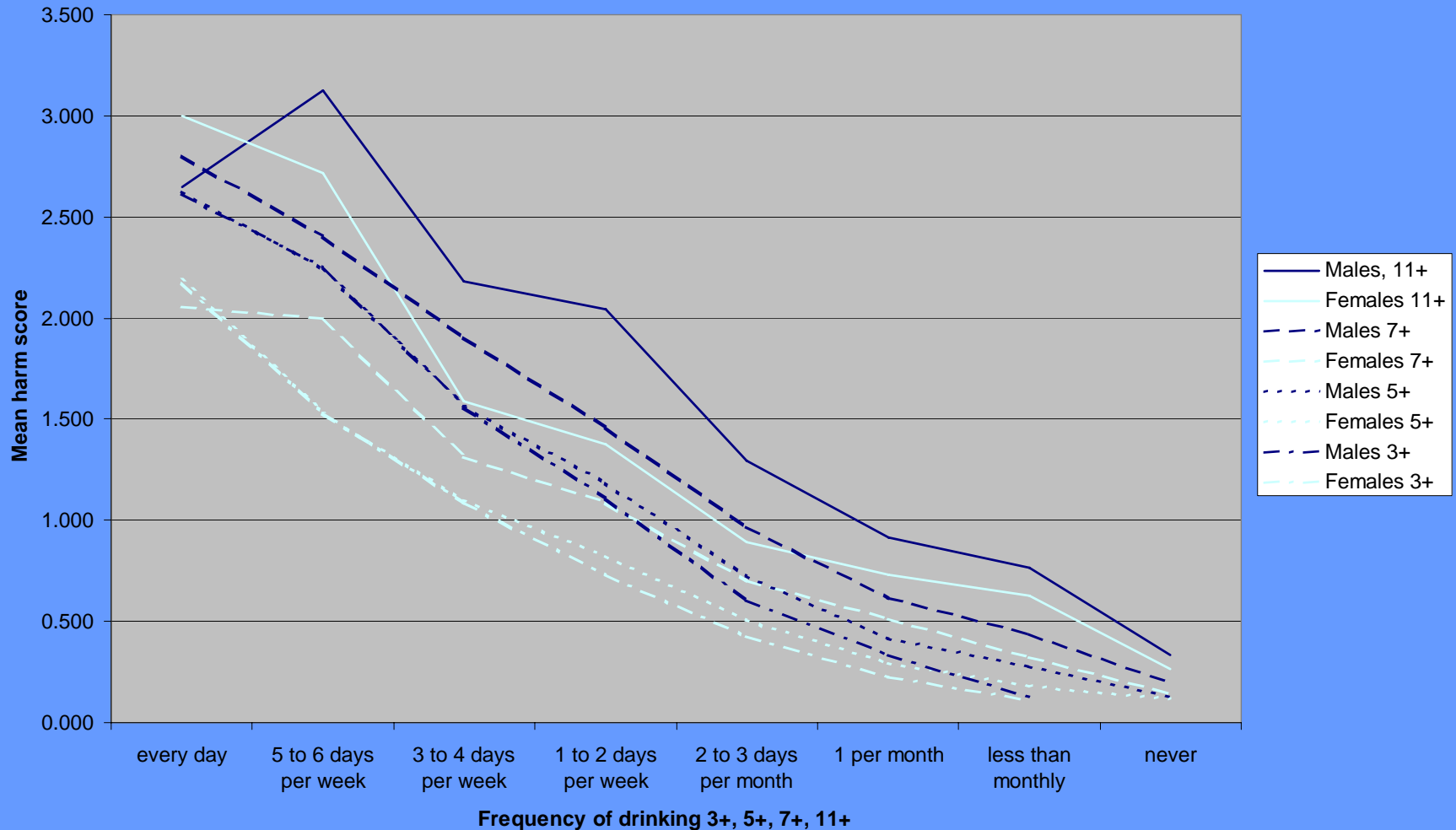
National Drug Strategy Household Survey, 2004

Mean harm score (10 items) by gender and consumption, young and middle-aged adults



Victoria Youth Alcohol and Drug Survey, 2003 & 2004 – ages 16-24

Mean harm score (7 items) by frequency of exceeding 3+, 5+, 7+, 11+ thresholds, by gender



Looking at the risk curves

- Risk rises more or less as a straight line with the frequency of exceeding each threshold
 - This would actually mean curvilinear with frequency, given the scale
- Males mostly higher than females for same frequency at each threshold
- Young adults consistently report more trouble than the middle-aged at the same drinking level
 - little justification here for female threshold being set lower than male
 - lower threshold for youth and young adults than for older adults?

Issues in numeric guidelines

- Re-examine 10 gm as “standard drink”
- Quantifying risk – what are acceptable limits for setting thresholds?
 - Include discussion of this in main document
 - Different or same acceptable limit for pregnancy, youth vs. older, etc.?
- Different limits by age?
 - Particularly for daily limits?
- Re-examine limits by gender
 - Daily limits the same as in Canada?
- Frequency as well as quantity for acute?

The reception of the guidelines: 1

National Drug Strategy Household Survey

Australians aged 12+, 2004 (Cooper-Stanbury & Summerill, 2005)

- Heard of a standard drink? 87% yes
- No. of standard drinks on cans & bottles? 49% yes, 26% DK
- Heard of Australian alcohol guidelines? 40% yes, 7% DK
- *Chronic problems*: How many drinks daily for many years without worsening health?

– For a male: 0: 12%

1: 15%

2: 28%

3: 26%

4: 8%

5: 3%

6+: 6%

for a female: 0: 15%

1: 35%

2: 30%

3: 14%

4: 3%

5: 1%

6+: 2%

So –

-- Australians tend to estimate the “chronic limit” at lower than the guideline – 81% for males, 50% for females

-- A plurality estimate the “acute limit” at where the guideline is for each gender

→ a real risk that publicizing the present guidelines will lead to “drinking up”?

The sobering news from drinking surveys

- General populations report only 1/3 – 2/3 of what they drink
 - Some of the loss is from drinkers outside the sampling frame (e.g., non-household), and non-interviews
 - Some from frequent drinkers forgetting low-frequency occasions
 - Some from self-deception
 - Also some overestimation (youth particularly?), which makes the story worse
 - Can be improved with better questions, but only so far

survey underreporting and drinking guidelines: complexities

- The medical epidemiological studies basically depend on survey responses
 - Often responding to pretty bad questions
- So risk curves probably overestimate rate of harm for a given amount of drinking
- If the general population does the same underestimation in applying the guidelines, this may compensate
- But we don't know this to be the case – needs to be studied

The reception of the guidelines: a series of research issues

- How is the “standard drink” understood –
 - 10 gm? or higher?
 - If higher, the actual limits as interpreted are higher
- How well are the guidelines recognized and understood?
 - Does anyone see them as a “drink up” standard?
- How well can Australian count weekly consumption?
 - An alternative is a low daily limit, then weekly is not needed
- How well can/do Australians remember the acute limit of 4 or 6 drinks (for instance)?
 - How about after the 5th drink?

Conclusions

- Drinking guidelines pose a number of issues to the epidemiological literature
 - Some progress since the last revision
 - Still many issues, particularly around:
 - Acute/daily limit recommendations
 - Quantifying Guidelines 2-11
- But the issues are not only epidemiological
 - Pluses and minuses of the Guidelines/thresholds approach
 - How are the guidelines received and interpreted?
 - What is the appropriate level of risk to use as a threshold in official recommendations to the general public?
- There is much to be done, and much to be discussed.