

# **Life-course consequences of adolescent and early adult drinking: Challenges and open questions**

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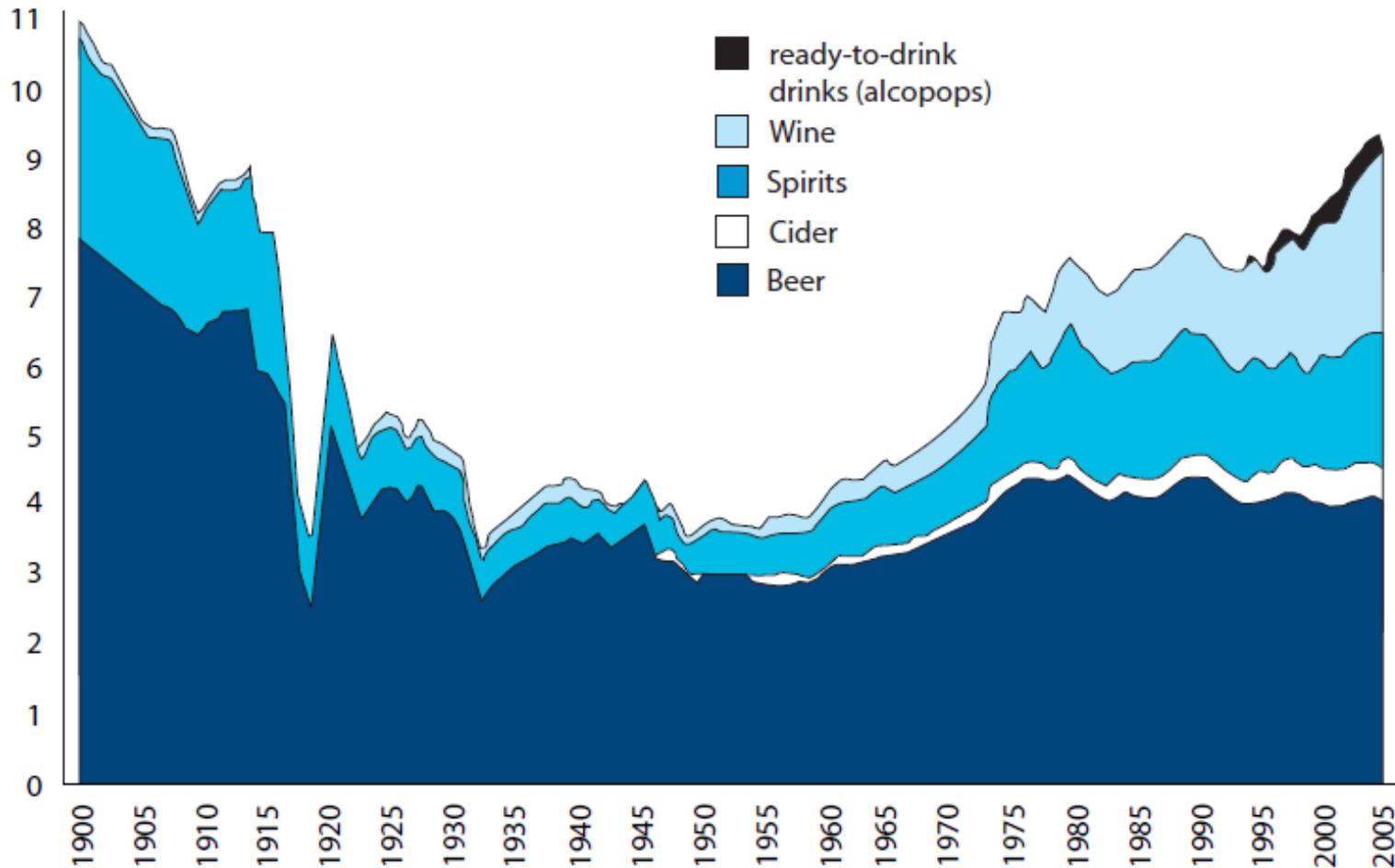
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# Alcohol use *and* abuse is harmful

- Global burden of disease
  - 4% of total mortality
  - 3<sup>rd</sup> leading risk factor for premature death/disability
- Health and social costs to individual, society
  - Injuries, cancer, cardiovascular, addiction
  - Crime, violence, productivity
- Poor: Greater disease burden per unit alcohol

Hall & Degenhardt, 2009; Rehm et al., 2009; WHO, 2009

# Per Capita pure alcohol consumption: Litres per head, UK, 1900-2005



# Consensus and Momentum?

- World Health Organization (WHO Global Strategy to Reduce the Harmful Use of Alcohol, 63<sup>rd</sup> World Health Assembly, May 2010; Babor et al., 2010)
- Alcohol Health Alliance UK (>30 organisations)
  - Health First: An Evidence-based Alcohol Strategy for the UK, 2013
- Alcohol Research UK
- Alcohol Concern
- Scotland

# Selected Proposed Targets

- Pricing: Minimum per unit, no multi-buys
- Availability: Under 18, hours, placement
- Marketing: Children, sports sponsorship, content of advertising, placement in supermarkets
- Labeling: Units, nutrition, calories
- Drink-driving: ↓ limit to .05, or .02; random checks

# Challenges to Policy Implementation

- Legal Challenges
- Debate: What voice should drinks industry have in public health?
  - Misrepresenting evidence, using tactics similar to tobacco (McCambridge et al., 2013)
- Government priorities

Role of prospective  
long-term cohort studies?

# Major scholars have concluded...

...evidence base for causal impact of alcohol use on health/success *from high-quality long-term prospective studies* is relatively weak

- Kandel 1978
- Newcomb and Bentler 1988
- Jessor 1995
- MacLeod et al. 2004
- McCambridge et al. 2011

# Documenting Consequences: Intrinsic Challenges

**CATASTROPHIC CONSEQUENCES RARE**

**EARLY 20s: HETEROGENEOUS, CHAOTIC**

**SELECTION EFFECTS LIKELY**

**POSSIBLE BENEFITS**

**MORE DANGEROUS FOR SOME**

# Major Strengths of Cohort Data

- Population based
  - Large n, representative, subgroups
- Past → Present → Future
  - Timing, Duration/Chronicity, Spells
  - Transitions, Turning Points, Critical Periods
- Broad-based measurement
  - Ages/stages, Direct: Cognitive, Physical
  - Collateral reporters, Administrative data

# Documenting Consequences: Strategies Using Long-term Cohort Studies

## **CATASTROPHIC CONSEQUENCES RARE**

- Large n X
- Sufficient heavy users X
- Low attrition ?

## **EARLY 20s: HETEROGENEOUS, CHAOTIC**

- Midlife follow-up X

## **SELECTION EFFECTS LIKELY**

- Strategic analytic strategies X

## **POSSIBLE BENEFITS**

- Assess positive consequences X
- Assess curvilinear effects X

## **MORE DANGEROUS FOR SOME**

- Moderators X

Alcohol Consequences:  
10 Policy Relevant Questions  
to Ask with Cohort Data

# Policy Relevant Questions for Cohort Data

## Fundamental/Basic

1. What ARE the harms of adolescent and young adult drinking?
2. Who is most vulnerable to risks of drinking?

# Policy Relevant Questions for Cohort Data

## Timing

3. Does early (binge) drinking matter?
4. Are there critical periods ...
  - ... of risk?
  - ... of potential for positive change?
5. What are the turning points OUT?

# Policy Relevant Questions for Cohort Data

## Intergenerational Links

6. How do parents socialize children/young adolescents re alcohol? What should they do?
7. Role of parents in late adolescence?
8. Young adults as parents: Does alcohol impact parenting?

# Policy Relevant Questions for Cohort Data

Less traditional Qs (for longitudinal research)

9. Recommended safe limits

10. Quasi-experiments as laws change

- a. Pricing: Minimum unit pricing
- b. Availability
- c. Marketing
- d. Labeling
- e. Drunk-driving

# Data Needs: Measures

- Consistent across TIME and studies
- Alcohol Consumption
  - Across days and weeks
  - Daily levels, frequency, frequency of bingeing
  - Patterns: Binges, peak, eBAC
  - Contexts: Preloading, setting, companions, pricing
- Alcohol Problems: Chronic (clinical) and acute
- Outcomes – broad range

# Data Needs: Designs/Analyses

- Rigorous controls for selection
  - Propensity methods
  - Regression discontinuity designs
  - Repeated cross-sections
  - Randomization
- Policy changes
  - Pre-post data: quasi-experimental designs
  - Special populations / Subsamples
  - Mechanisms

# Watershed Moment?



