18th Alcohol Policy Conference
Evidence to Action—Building an Evidence-based Social Movement

Washington DC, April 11-13, 2018

SECONDHAND HARMS FROM ALCOHOL:
RECENT US EVIDENCE WITH IMPLICATIONS FOR PUBLIC HEALTH PRACTICE AND POLICY ACTION

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Robin Room
La Trobe University, Centre for Alcohol Policy Research, Melbourne
AS REQUIRED BY THE ALCOHOL POLICY 18 CONFERENCE, I/WE HAVE SIGNED A DISCLOSURE STATEMENT AND NOTE THE FOLLOWING CONFLICT(S) OF INTEREST:

No conflicts of interest
WHAT WE’LL COVER

- The importance of studying alcohol’s harms to others (AHTO) besides the drinker.
- Present recent findings on children’s and coworkers’ exposures to AHTO
- Compare findings on the social location of AHTO in 10 societies, with data from US & multinational grants
- Examine associations between US State alcohol policy environment and various types of AHTO
- Examine AHTO and support for alcohol policies
- Explore implications for policy & interventions based on ethical and public health principles.
WHY STUDY ALCOHOL’S HARM'S TO OTHERS?

- AHTO has become a renewed focus both in the US and internationally.

- WHO elevated the issue by adding AHTO monitoring and reduction to its Global Strategy on Alcohol.

- Still today, most studies of alcohol’s harms focus on harms to the individual drinker (with some exceptions, e.g., FASD, drinking driving and IPV).

- The paradigm shift is to examine a wider range of harms from the victim’s perspective, in a policy-relevant way.
WHY STUDY ALCOHOL’S HARMs TO OTHERS? (2)

Some have argued the toll of alcohol problems might be doubled by adding the ‘costs’ AHTO.¹

In addition to drinkers, “innocents” like children and non-drinkers (or light-drinkers)—are also victims of harms stemming from other heavy drinkers.

Policy significant topic – by analogy, secondhand smoke moved tobacco controls; Kate discusses how those harmed tend to favor stronger alcohol policies.

ARG’S US NATIONAL ALCOHOL SURVEYS (NAS) & NAHTOS

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>RDD CATI Design</td>
<td>Telephone</td>
<td>Telephone</td>
<td>Telephone LL &amp; Mobile</td>
<td>Telephone LL &amp; Mobile</td>
<td>Telephone LL &amp; Mobile</td>
</tr>
<tr>
<td>Sample Size</td>
<td>7,612</td>
<td>6,919</td>
<td>7,969</td>
<td>7,071</td>
<td>2,830</td>
</tr>
<tr>
<td>Cooperation Rate</td>
<td>58%</td>
<td>56%</td>
<td>52%</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>African American &amp; Hispanic Oversamples</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Small States Augmented?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
PERCENT HARMED BY OTHERS DRINKING IN 2015 (EVER & 12 MONTHS)

Source: 2015 National Alcohol Survey and National Alcohol’s Harms to Others Survey (Greenfield, T. K., Karriker-Jaffe, K.J., Multiple PIs). Note: Weighted Percentages; manuscript in preparation.
WHO ARE THE MOST COMMON PERPETRATORS FOR A GIVEN HARM?


2015 U.S. National Alcohol Survey (N=5,922)
WHAT OTHERS CAUSED THE HARM MAKES A DIFFERENCE TO DISTRESS

Assessed **distress** by depression and anxiety indicators

- 4-item combined PHQ-2 and GAD-2 scales:
  - Feeling: 1) down/depressed/hopeless, 2) little interest/pleasure in doing things; 3) nervous/anxious/on edge, 4) unable to stop or control worrying.

**Financial troubles** due to *family member* ↔ distress: OR≈5
due to *partner’s drinking* ↔ distress: OR=4.8

- (adjusting for numerous personal characteristics of victim)

**Threatened/made afraid** *family member* ↔ distress: OR≈3
due to ‘*partner*’ or ‘*a friend*’ ↔ distress: both ORs≈4

**Harms due to strangers** play little role in feeling distress.

HARMS TO CHILDREN FROM OTHER DRINKERS: REPORTED BY CAREGIVERS

<table>
<thead>
<tr>
<th>Harm Description</th>
<th>Mean Severity (rated 1-10)</th>
<th>Prevalence %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough money for child’s needs</td>
<td>7.4</td>
<td>0.72</td>
</tr>
<tr>
<td>Child physically hurt</td>
<td>3.6</td>
<td>0.85</td>
</tr>
<tr>
<td>Child left unsupervised</td>
<td>5.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Family services called</td>
<td>4.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Child witnessed violence</td>
<td>4.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Child yelled at</td>
<td>5.1</td>
<td>3.8</td>
</tr>
<tr>
<td>ANY HARM FROM OTHER DRINKER</td>
<td></td>
<td>3.5</td>
</tr>
</tbody>
</table>

DATA- US NAHTOS 2015: of n=61 caregivers reporting child problems from other drinkers

Of 1,395 working at least part time in 2015, **38% of workers were absent** “totally unable to work” **at least one day** in the last 12 months.

Of those days absent, **4.4% were ‘due to your own drinking’**; an additional **5.5% were ‘due to someone else’s drinking’**.

In this case the burden is more than doubled when alcohol’s harms to others are added to the drinker’s own problems.

### Problems with Drinking Coworkers in the U.S.

#### Percentages Exposed to Each Harm (of those harmed, n=62)

<table>
<thead>
<tr>
<th>Harm</th>
<th>Once</th>
<th>More than once</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatively affected ability to do job</td>
<td>14.5</td>
<td>51.6</td>
</tr>
<tr>
<td>Work productivity reduced</td>
<td>17.4</td>
<td>45.2</td>
</tr>
<tr>
<td>Had to cover for coworker</td>
<td>9.7</td>
<td>53.0</td>
</tr>
<tr>
<td>Had to work extra hours</td>
<td>1.6</td>
<td>54.8</td>
</tr>
<tr>
<td>Led to an accident at work</td>
<td>11.3</td>
<td>4.8</td>
</tr>
</tbody>
</table>

2015 NAHTOS employed respondents: 4.4% (n=62) reporting harms from coworkers’ drinking

Source: Greenfield et al., KBS Annual Epidemiology Symposium, Stockholm, 2016.
PROBLEMS WITH DRINKING COWORKERS VARY A LOT BY COUNTRY

Percentages of Workers Exposed to Each Harm

- Negatively affected ability to do job
- Work productivity reduced
- Had to cover for coworker
- Had to work extra hours
- Had an accident/close call at work

Sri Lanka, India, Vietnam, Chile, Nigeria, US
How is harm from others’ drinking distributed in different populations? Looking at gender, age group, rural/urban residence, and own drinking status.

Nine societies for comparison with the U.S.; a population survey of harms from others’ drinking was done in each.

In tables which follow, they are arranged in descending order of Gross National Income per capita in 2013 (except Australia > US).

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>N</th>
<th>Sampling scope</th>
<th>Age</th>
<th>Interview mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>2013</td>
<td>2000</td>
<td>6 states &amp; capital territory</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>Australia</td>
<td>2008</td>
<td>2600</td>
<td>national</td>
<td>18+</td>
<td>LL CATI</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2008/09</td>
<td>3068</td>
<td>national</td>
<td>12-80</td>
<td>LL CATI</td>
</tr>
<tr>
<td>Chile</td>
<td>2013</td>
<td>1500</td>
<td>7 cities &amp; hinterland</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>Thailand</td>
<td>2012-13</td>
<td>1700</td>
<td>4 regions</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>Laos</td>
<td>2012-13</td>
<td>1200</td>
<td>3 regions</td>
<td>15-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2012-13</td>
<td>1500</td>
<td>6 provinces</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>India</td>
<td>2013</td>
<td>2800</td>
<td>Karnataka State</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2013</td>
<td>2000</td>
<td>National</td>
<td>18-64</td>
<td>Face to face</td>
</tr>
</tbody>
</table>
Part of the variation in rates reflects real differences
But it also reflects to some extent issues in translation and connotation, and sometimes in methodology
So instead we look at and compare variations in the social location of harms in the last year within each society –
  • (1) from a known drinker (relative/friend),
  • (2) from a stranger
We show a difference when it is significant (probability that the difference is random < 1%)
**DIFFERENCES BY GENDER**

SIGNIFICANT DIFFERENCES IN ODDS RATIOS ($p < .01$) IN HARM FOR **WOMEN** COMPARED TO **MEN**

<table>
<thead>
<tr>
<th>Harm from:</th>
<th>U.S.</th>
<th>Australia</th>
<th>New Zealand</th>
<th>Chile</th>
<th>Thailand</th>
<th>Sri Lanka</th>
<th>Nigeria</th>
<th>Vietnam</th>
<th>Laos</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Known drinker</td>
<td>↑</td>
<td>↑</td>
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<td></td>
<td>↓</td>
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<td></td>
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<tr>
<td>Stranger</td>
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</tbody>
</table>

Rates of harm from **known** drinkers for women and men did not significantly differ in 6/10 countries; went in opposite directions in pairs of countries where this did differ (AU & NZ vs India & Sri Lanka).

Harm from **strangers’** drinking occurred significantly more often for men than for women in 6 of 10 countries.
In richer countries, harms are more likely among younger adults, whether from relatives or friends or from strangers. This is true for harm from relatives or friends also in Thailand, Laos and India, but not for harms from strangers – which are higher among the middle-aged than younger adults in India.

... If harm from others’ drinking varies by age, it is usually highest among the younger.
There were few significant differences in harm between those living in rural and in urban areas, either from known drinkers or from strangers.

**In Laos**, rates of harms were significantly higher in urban than rural areas for both family or friend- and stranger- caused harms.

**In India**, rates were lower in urban areas for both categories. In Vietnam, rates were lower in urban areas for harm from family or friends.
DIFFERENCES BY RESPONDENT’S DRINKING STATUS: MODERATE DRINKER, RISKY DRINKER, VS. ABSTAINER

<table>
<thead>
<tr>
<th>Harm from:</th>
<th>U.S.</th>
<th>Australia</th>
<th>New Zealand</th>
<th>Chile</th>
<th>Thailand</th>
<th>Sri Lanka</th>
<th>Nigeria</th>
<th>Vietnam</th>
<th>Laos</th>
<th>India</th>
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</thead>
<tbody>
<tr>
<td>MODERATE DRINKER, VS. ABSTAINER</td>
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<td>Known drinker</td>
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<td>Stranger</td>
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<tr>
<td>RISKY DRINKER, VS. ABSTAINER</td>
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<tr>
<td>Known drinker</td>
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<td>↑</td>
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<tr>
<td>Stranger</td>
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</tr>
</tbody>
</table>

• Being a risky drinker oneself (*5+ drinks at least monthly*) exposes one to harm from drinking by family or friends in all 10 countries, and from strangers’ drinking in all but two (Vietnam & Laos).

• Results are mixed for moderate drinkers. In 4 of 6 richer countries, and two of poorer, moderate drinkers are more exposed than abstainers to harm from known drinkers. Moderate drinkers are more exposed to harm from strangers only in the US, Sri Lanka and India.

• Nowhere does being a drinker oneself protect from harm from others’ drinking.
Almost universally, being a risky drinker oneself (5 or more drinks at least once a month) raises the odds of suffering harm from others’ drinking.

Being a younger adult raises the odds of being harmed in many countries, including the US.

Patterns by gender, and by being a moderate drinker (vs. an abstainer), are mixed.

In most countries, residing in a rural vs. an urban location seems not to make a significant difference.

The distributions of AHTO in society look substantially different from the distributions of heavy drinking.
STATE ALCOHOL POLICY ENVIRONMENTS AND AHTO—WON K. COOK
Our new work, together with Tim Naimi & Ziming Xuan, examines links between the state alcohol policy environment and various harms from others’ drinking.

APS state policy environment scores were based on expert ratings of effectiveness of 29 policies in deterring: a) binge-drinking; b) impaired-driving

- Pooled NAS/NAHTOS data 2000-2015 (n≈25,000)
- Multi-level logistic regression models included individual characteristics and state rates of policing to examine whether state APS scores were associated with AHTO variables.
- APS scores were lagged a year before individual was interviewed
- Considered age groups: 1) all adults, 2) under 40; 3) ≥ age 40
### SUMMARY OF MULTI-LEVEL LOGISTIC REGRESSIONS PREDICTING AHTO VARIABLES FROM STATE POLICY SCORES

<table>
<thead>
<tr>
<th></th>
<th>AGGRESSION-RELATED</th>
<th>DRIVING-RELATED</th>
<th>FAMILY OR FINANCIAL</th>
<th>ANY OF THREE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>0.992 (0.982-1.002)</td>
<td>0.992 (0.982-1.001)</td>
<td>1.004 (0.995-1.012)</td>
<td>0.994 (0.988-1.002)</td>
</tr>
<tr>
<td><strong>Ages &lt; 40</strong></td>
<td><strong>0.983 (0.971-0.997)</strong> *</td>
<td><strong>0.987 (0.974-0.999)</strong> *</td>
<td>1.003 (0.991-1.016)</td>
<td><strong>0.988 (0.979-0.998)</strong> *</td>
</tr>
<tr>
<td><strong>Ages &gt; 40</strong></td>
<td>1.005 (0.993-1.017)</td>
<td>0.998 (0.986-1.011)</td>
<td>1.004 (0.993-1.015)</td>
<td>1.001 (0.994-1.009)</td>
</tr>
</tbody>
</table>

Adjusting for individual characteristics and state level of policing (same results if drinking volume added)

* * p < .05  

**Note:** STRONGER results were seen for the APS ‘reduce driving impairment’ scores.

Relationship between national-level detrimental drinking culture and individual alcohol-related harms in drinkers has been established for LAMI Countries.

We ask: Is there a higher risk of AHTO in U.S. states with high binge drinking rates?

Could state policy environments act through changing drinking cultures (specifically, by lowering binge drinking rates)?
## STATE BINGE DRINKING RATES & AHTO:
### Multi-level logistic regressions

<table>
<thead>
<tr>
<th></th>
<th>All US adults AOR (95% CI)</th>
<th>Age &lt; 40 AOR (95% CI)</th>
<th>Ages &gt; 40 AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGGRESSION-RELATED</td>
<td><strong>1.056</strong>+ (1.029-1.083)</td>
<td><strong>1.067</strong>+ (1.030-1.106)</td>
<td><strong>1.047</strong>**+** (1.010-1.087)</td>
</tr>
<tr>
<td>DRIVING-RELATED</td>
<td><strong>1.036</strong>+ (1.007-1.065)</td>
<td><strong>1.046</strong>+ (1.009-1.085)</td>
<td><strong>1.026</strong> (0.986-1.068)</td>
</tr>
<tr>
<td>FAMILY OR FINANCIAL</td>
<td>1.001 (1.000-1.027)</td>
<td>0.981 (0.940-1.022)</td>
<td>1.013 (0.977-1.050)</td>
</tr>
<tr>
<td>ANY OF THREE TYPES</td>
<td><strong>1.043</strong>+ (1.024-1.062)</td>
<td><strong>1.058</strong>+ (1.030-1.087)</td>
<td><strong>1.032</strong>+ (1.007-1.058)</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001, + p < .0001

Models adjust for individual characteristics and state median income.

**Source:** W.K. Cook, T.K. Greenfield, K. J. Karriker-Jaffe, D. Patterson(2017). State binge drinking prevalence is associated with alcohol’s harms to others: Results from national population surveys in 2000-2015. American Public Health Association Annual Meetings, November 4-8, 2017, Atlanta, GA
DIRECT & INDIRECT ALCOHOL POLICY EFFECTS: A MEDIATIONAL ANALYSES

* p < .05, ** p < .01, *** p < .001, **** p < .0001

Models adjust for individual characteristics and state level of policing.

More stringent alcohol policies at the state level have potential to reduce aggression- and driving-related harms from other drinkers.

State Alcohol Policy Environments appear to have both direct and indirect paths in reducing AHTO (i.e., affecting harms directly AND via reducing state binge drinking rates).

State Policy effects are not clear for family and financial harms and additional interventions may be needed.
EFFECTIVE ALCOHOL POLICIES

Many ways to reduce the burden of alcohol

- Some policies increase availability of treatment for problem drinkers
- Other policies seek to restrict availability of alcohol (hours, days, locations of sale)
- Taxation and other pricing strategies make alcohol more expensive

★ Not all policies are equally popular among citizens (or law-makers)
US ALCOHOL POLICY OPINION STUDIES

Prior work with law-makers

• Research is only one part of policy-making
• Public opinion can sway the agenda

Sources:

www.arg.org
Research is only one part of policy-making
Public opinion can sway the agenda

“If you don’t have the local people behind you, and in fact if it’s not a sellable political issue, then you can have the best information in the world and [a legislator] will throw it in the garbage can...”

Sources:
We examine three important constituencies:

- people who have been harmed by someone else’s drinking (victims of AHTO)
- people with active alcohol problems of their own
- people in recovery from alcohol/drug problems
METHODS

- **5,152 respondents** in 2014-15 National Alcohol Survey
- Representative sample of US residents ages **18+ years**
- Computer-assisted **telephone interviews** conducted in English or Spanish (8.4%)
- **Random digit dialing (RDD) samples** of adults in landline households and cellular phone users (40.9%)
- Geographically-targeted **oversamples** of Black/African American and Hispanic/Latino adults
- Cooperation rate: **43.4%** (52.0% cell, 38.7% landline)
- **Study protocols approved** by Institutional Review Boards of the Public Health Institute (Oakland, CA) and fieldwork agency (ICF Macro, Inc., Fairfax, VA)
POLICY OPINIONS

• Support for health insurance coverage of alcohol treatment
• Restriction of alcohol sales in neighborhood corner stores
• Increasing taxes on alcohol
POPULARITY OF POLICY OPINIONS

- Insurance coverage for Tx: 82%
- Restrict sales: 54%
- Raise taxes: 28%
- Lower taxes: 11%

Overall Recovery Harmed by other AUD
RESULTS

Popularity of insurance coverage for treatment

- Overall, 82%
- Harmed by other, 85%
- Spouse harm, 89%
- Recovery, 92%

www.arg.org
RESULTS

Popularity of restricting sales

Overall, 54%

AUD, 35%

10%

20%

30%

40%

50%

60%
RESULTS

Popularity of raising taxes

Overall, 28% Spouse harm, 40%
45% 40% 35% 30% 25% 20% 15% 10% 5% 0%

Overall, 28%  AUD, 20%

Overall  Harmed by other  Spouse harm  Stranger harm  Recovery  AUD

www.arg.org
Respondents who had been harmed by someone else’s drinking in the past year:

- More likely to support raising alcohol taxes (OR=1.59, p<.001)

Victims of spouse harm: OR=1.70, p<.05

Victims of stranger harm: OR=1.55, p<.01
ADJUSTED RESULTS

Correlates of policy opinions

• Respondents who had been harmed by someone else’s drinking in the past year:
  • More likely to support insurance coverage of treatment than respondents who have not been harmed (OR=1.36, p<.05)
ADJUSTED RESULTS

Correlates of policy opinions

- **People in recovery:**
  - More likely to support insurance coverage of treatment (OR=3.20, p<.001)

- **People with alcohol problems:**
  - Less likely to support restricting sales (OR=0.56, p<.01)
CONCLUSION

- People who have been harmed by other drinkers and people in recovery are more supportive of alcohol policies that may reduce alcohol-related harms.
INTERESTED CONSTITUENTS

Small groups of highly-motivated partners?

- Recent AHTO 20%
- Lifetime AHTO 12%
- People in recovery 9%
- Everyone else... 59%

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INTERESTED CONSTITUENTS

Who are other possible partners?

• Broader constituent groups consistently supportive of alcohol policies:
  • Women
  • Older people
  • Racial/ethnic minorities
  • People with lower socioeconomic status
  • People living in unsafe neighborhoods
QUESTIONS FOR FURTHER DISCUSSION

Could nuisance & safety concerns be the most relevant for communities and policy makers? The greater concerns seen in disadvantaged neighborhoods point to value of local-option measures & zoning regulations (CUPs).

Targeting the ‘perpetrators’ of the harms can easily lead to ‘moralized’ interventions (to punish the few ‘rotten apples’).

Some individual approaches for severe offenders may be OK: e.g., South Dakota’s 24/7 Sobriety strategy—providing rapid, certain and modest sanctions for those guilty of DWI and alcohol-related IPV.

Still we believe emphasizing broader population strategies using public health principles may generally be more effective and additionally should reduce stigmatization of heavy drinkers.

National Alcohol Surveys funded by the National Institutes of Health’s NIAAA (P50AA005595 PIs: 2000-2015: T. Greenfield; current 2016-2020: W. Kerr)

Additional funding from R01AA022791 (Greenfield & Karriker-Jaffe, Multiple PIs): AHTO Among US Adults: Individual and Contextual Effects

With many co-investigators including Robin Room, Anne-Marie Laslett & Sandra Kuntsche in Australia, and M-PIs Tom Greenfield (California), Sharon Wilsnack (North Dakota), Kim Bloomfield (Denmark), we are now conducting a multinational AHTO Project studying effects of gender culture and policy on AHTO (GENAHTO; R01AA023870). This includes multiple surveys:

- 7 LMIC surveys were a WHO-ThaiHealth project; the 9 surveys were also supported by national resources & collated under an NHMRC (Australia) grant

Opinions expressed are those of the authors and do not reflect official positions of NIAAA, NIH or the sponsoring institutions.

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