Alcohol screening and brief intervention (SBI) outcomes

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In studies of SBI, alcohol consumption decreases after SBI.

In controlled SBI trials, alcohol consumption decreases in both groups.

Correlation is not causation.

Randomized controlled trials with clinically important outcomes are the types of studies needed to understand true effects.
Brief intervention (BI), among adults identified by screening (S) as drinking too much (SBI), in general practice (GP)/primary care settings, decreases self-reported risky use.
But serious concerns about whether it affects any important health consequences, and about implementation in diverse real world settings, suggest that health policy and practice recommendations are out of proportion to the evidence.
Screening means asking everyone one or a few questions validated to detect unhealthy alcohol use. Unhealthy alcohol use includes drinking amounts that increase the risk of health harms or have already caused them, and drinking that is out of control (known as dependence or disorder).

“How many times in the past year have you had 5 (4 for women) or more drinks in a day?”

Brief intervention (BI) is counseling that ranges from a few minutes of advice once, to 30–60 minutes of nonjudgmental, empathic, highly skilled motivational interviewing done 2–4 times.
There are no randomized controlled trials (RCTs) comparing SBI to no SBI
Dozens of randomized controlled trials (RCTs), and now dozens of systematic reviews and meta–analyses of RCTs, find consistent results of SBI (BI in people identified by screening)
The most robust effects are for repeated BI, not one-time or brief advice. And effects are limited to patients who do not drink too much or out of control, or too little to have improvement detected in a trial even if still risky...

...among middle aged men in developed countries.

O’Donnell 2013
Jonas 2012
Saitz 2010
Kaner 2009
Bertholet 2005
Whitlock 2004
Beich 2003
In RCTs of BI:

> > 3–4 people stop reporting that they drink risky amounts regardless of BI

> > Compared to getting no BI, those who get BI report drinking 3–4 standard drinks per week less

> > 7 of 10 people who *don't get* brief intervention continue to report they drink risky amounts

> > 6 of 10 people who *get* brief intervention continue to report they drink risky amounts

Beich 2003
Here are some outcomes that BI does not affect or for which BI effects are inconsistent. Notice that these things are often measured objectively (not self-report).
Liver blood tests
Alcohol–related diseases
Injuries
Connection to specialist alcohol care
Emergency department visits
Hospitalization
Cost
Death

Jonas 2012
Kristenson 1983
Fleming 2002
Cuijpers 2004
These are some other evidence gaps for primary care alcohol SBI efficacy:

- women
- older people
- younger people
- minority ethnic groups
- people with dependence
- people with comorbidity
- people living developing countries
RCTs do suggest that BI can reduce alcohol exposed pregnancy (self-reported drinking or contraceptive use).

Floyd 2007
Velasquez 2010
Velasquez 2013
Self-report drinking is the main outcome affected in SBI RCTs. It could all be due to social desirability bias. People in these trials are counseled to drink less and then they are asked if they are drinking less. This is not an esoteric pointy-headed academic concern. It is real. It could explain everything. Especially since other objectively measured outcomes do not seem to improve.
Most of the RCTs are in GP/primary care settings
Hospital patients have more severe unhealthy alcohol use. When restricted to methodologically sound RCTs, SBI lacks efficacy in hospitalized patients.

McQueen J 2011
Saitz 2007
Freyer-Adam 2008
Bischof 2008

**Freyer-Adam J forthcoming**
SBI theoretically could help people with more severe problems by linking them to specialist services. There are questions about whether this works both in terms of  
   1) getting people linked, as well as 
   2) whether it improves outcomes. Stay tuned for the next talk to hear about efficacy for that.
RCTs in emergency departments find very small effects on self-reported drinking. Some find effects, some don’t. They may be more likely to find benefits when the people studied drink neither too little nor too much.

Dependence identified in ED, some patients hospitalized. Null.

Monti JCCP 2016: MI>BA for self report drinking, sex risk
You will read and hear that alcohol SBI:

>>works across general health settings and
>>it reduces consequences like injury, and reduces healthcare use and costs.
These are based on individual studies, extrapolations, and assumptions in simulation models. Not robust consistent findings from actual individual trials.
SBI studies in people who have other risks like other drug use or depression usually find no effects of B1, though few such studies have been done.
More null studies are published every day.
Let’s assume the small effects on drinking are real. Small effects can be large across populations. To achieve those effects requires broad reach of valid screening and BI with fidelity to BI proven efficacious in RCTs. This is unlikely.
Policy recommendations often lead to screening, but screening poorly done. Policy recommendations focus on single brief interventions and even just quick advice. Effects on drinking and consequences are not detected in real world practice (in well–done studies).

Bradley 2011
Hilbink 2012
Van Beurden 2012
Kaner 2013
Williams 2014
BI is a skilled intervention, difficult to learn and maintain.
Implementing SBI universally is a huge effort and investment of training, systems, time and effort.
In studies of BI implementation and effectiveness, it does not get implemented or doesn't retain effectiveness, or both.
Electronic SBI might help solve these problems. But RCTs show very small effects, again, on self-report drinking. And it isn’t clear how to get people to participate.
Are there any harms of alcohol SBI? Unhealthy alcohol use in a medical record could affect insurability and employment. A number of RCTs do not exclude the possibility of more drinking after BI, and at least two studies found such effects.

Beich et al 2007 Increased binge drinking among women
Hilbink 2012
So.
The evidence is that multiple skilled brief interventions for risky, non-dependent alcohol use in outpatient general practice settings can modestly reduce self-reported use.
What should we do with that evidence?
We should question it. Demand RCTs with clinically important outcomes meaningful to patients. Identify ingredients of current approaches that do and do not contribute to efficacy, discover new more efficacious ways to address unhealthy alcohol use. Maybe repeat BI over time (and study it). Work to explore and mitigate any detrimental effects.
Don’t confuse alcohol SBI—a universal preventive service intended to reduce risks and harms—with other reasons and ways to identify and address unhealthy alcohol use.
Unhealthy alcohol use should not be ignored.
People should be informed about the true risks of use, for example pre-pregnancy, with other medications, before driving, etc.
Clinicians need to know if their patients are drinking if they are going to properly diagnose just about any symptom (for example, anxiety, depression, high blood pressure, heartburn) or prescribe any medication.
Screening tools do not provide the necessary information to do that. They are designed for SBI.
While we revisit the research, a few recommendations for policy and practice.
For practice, screen, and ask additional questions as needed. Just like you would ask about anything else people put in their bodies (medicines, natural products, diet). Provide feedback and information and counsel, but don't expect miraculous change.
For policy, if recommending universal SBI, do so to improve attention to alcohol but don't expect it to reduce much in the way of alcohol consequences by itself. Recognize it will be costly and will require major implementation efforts. Seriously consider whether tying SBI to quality measures that lead to withholding payments are appropriate.
Be honest about the science. If we aren’t, it gives us a bad reputation.