Computer-Facilitated Screening and Clinician Brief Advice: Effects on Heavy Episodic Drinking Among Adolescents in the USA and Czech Republic

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Disclosure

- Neither I nor any member of my immediate family have a financial relationship or interest with any proprietary entity producing health care goods or services related to the content of this CME activity
- My content does not include discussion or reference to commercial products or services
- I will not discuss an unapproved or investigative use of commercial products or devices

Background & Significance

Heavy Episodic Drinking (HED)

- 5+ drinks/occasion for males; 4+ for females[1]
- Common among adolescents worldwide
- Adverse effects on brain development, health, psychosocial outcomes [2]

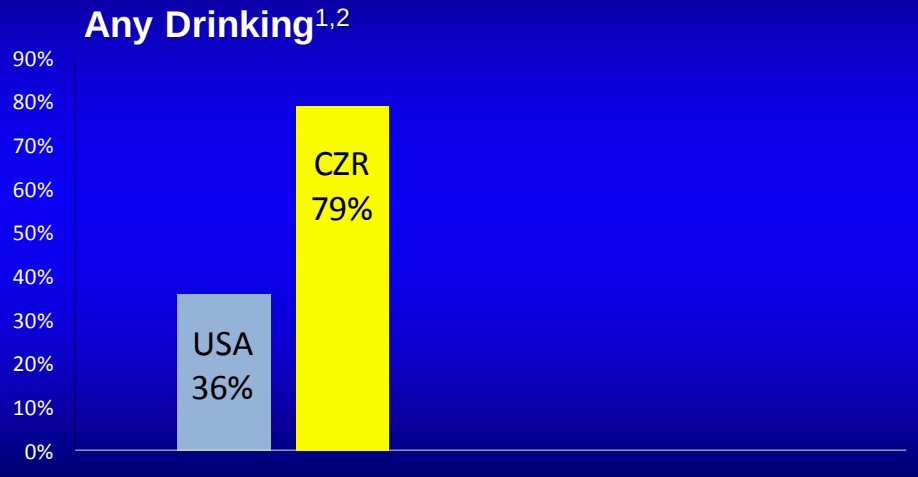
1. Wechsler H. et al. JAMA 272:1672-1677, 1994
2. Kuntsche E. et al. Alcoholism: Clinical & Experimental Research. February 2013; 37(22): 308-314

Previous Study

Computer-facilitated Screening and clinician Brief Advice (cSBA) reduced past-12-month *any-drinking* among adolescents in USA, but not in Czech Republic (CZR)[1]

1. Harris et al., Pediatrics. June 2012;129(6):1072-1082.

Past-30-Days Drinking: USA vs CZR
Ages 15-16



1. Hibell B., et al. The ESPAD Report 2011.
2. Eaton E. K., et al. Surveillance Summaries, Vol. 61, No 4 , 2012

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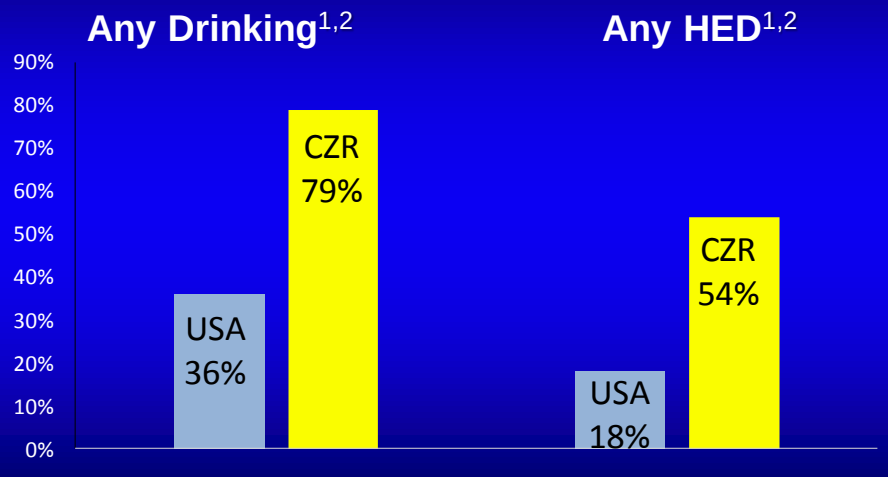

1. Hibell B., et al. The ESPAD Report 2011.
2. Eaton E. K., et al. Surveillance Summaries, Vol. 61, No 4 , 2012

Study Objective

To assess cSBA effects on *HED* among 12- to 18-year-old primary care patients in USA and CZR

Hypothesis

- Among 12-18 y.o. primary care patients, cSBA will reduce past-3-month HED more than Treatment as Usual (TAU), as measured by Timeline Follow-Back (TLFB)
- Without reinforcement, effect will dissipate by the 12-month follow-up

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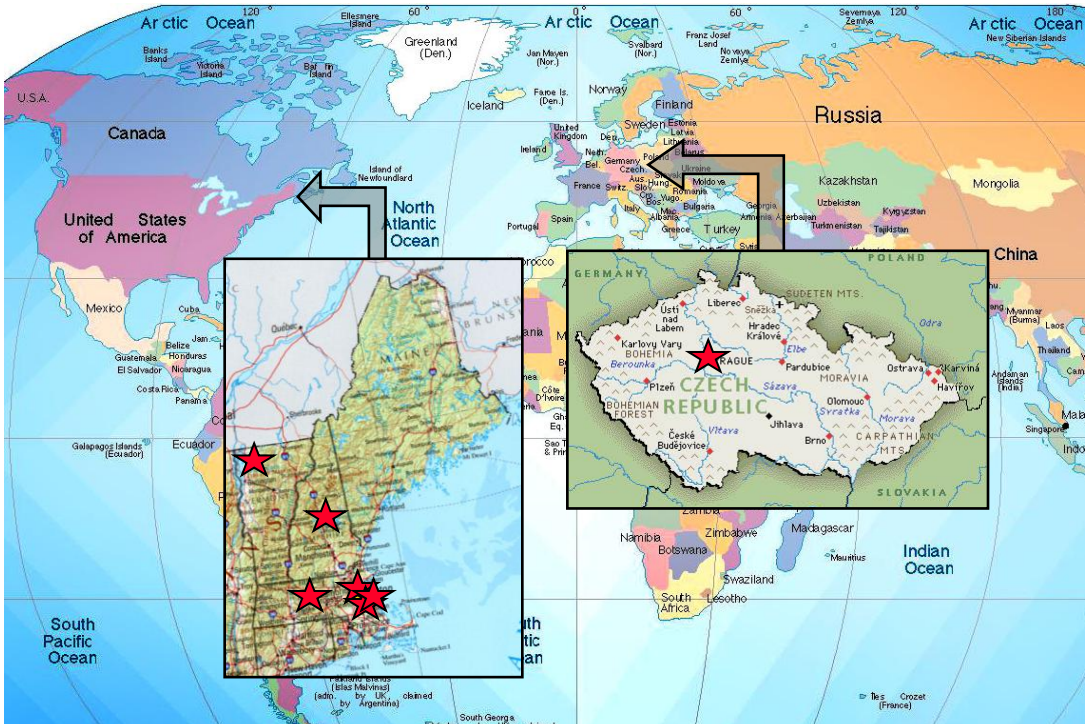
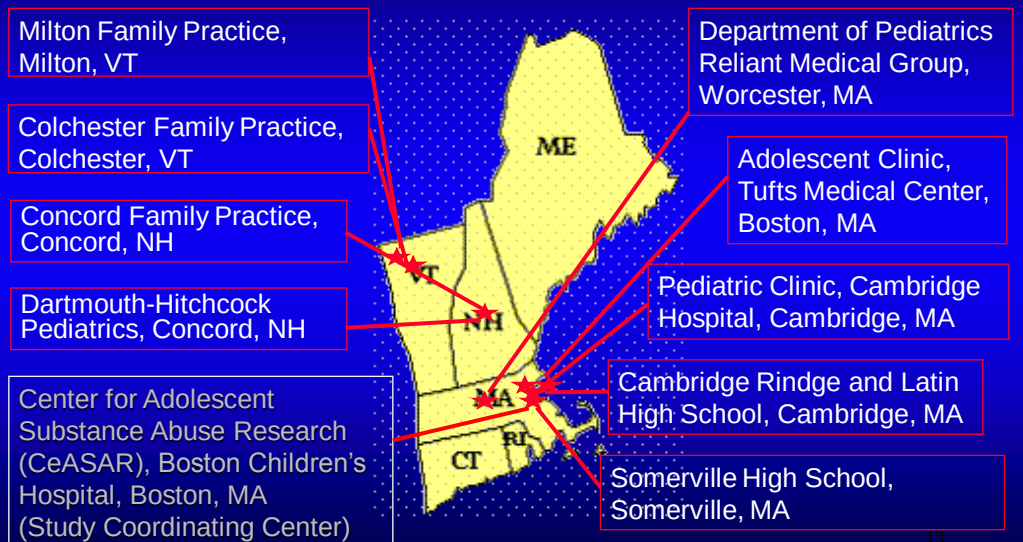


Screening and Brief Advice in Primary Care

The New England Partnership for Substance Abuse Research (NEPSAR)



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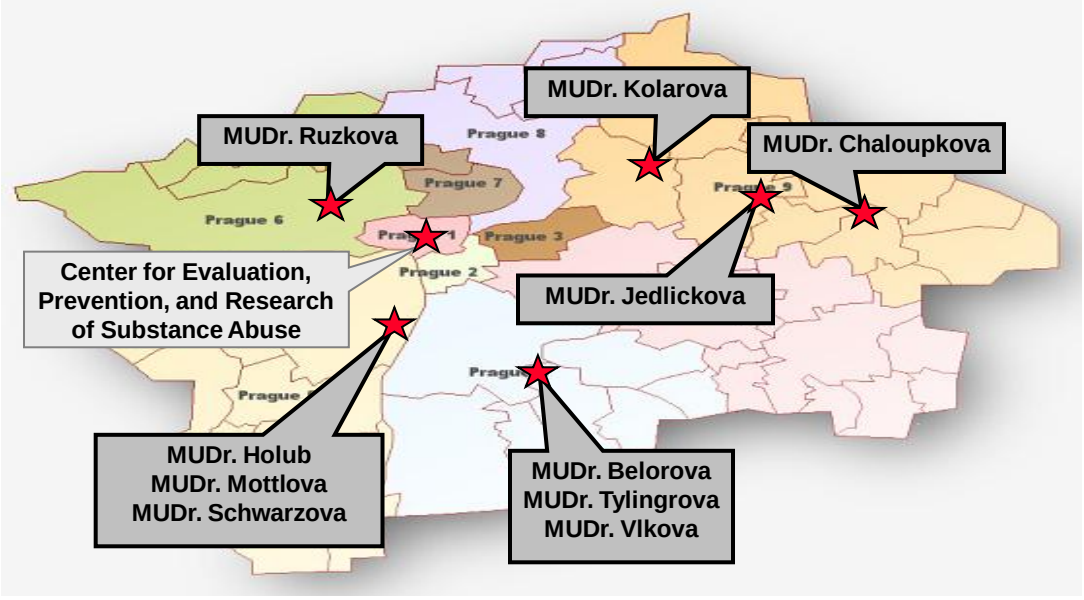
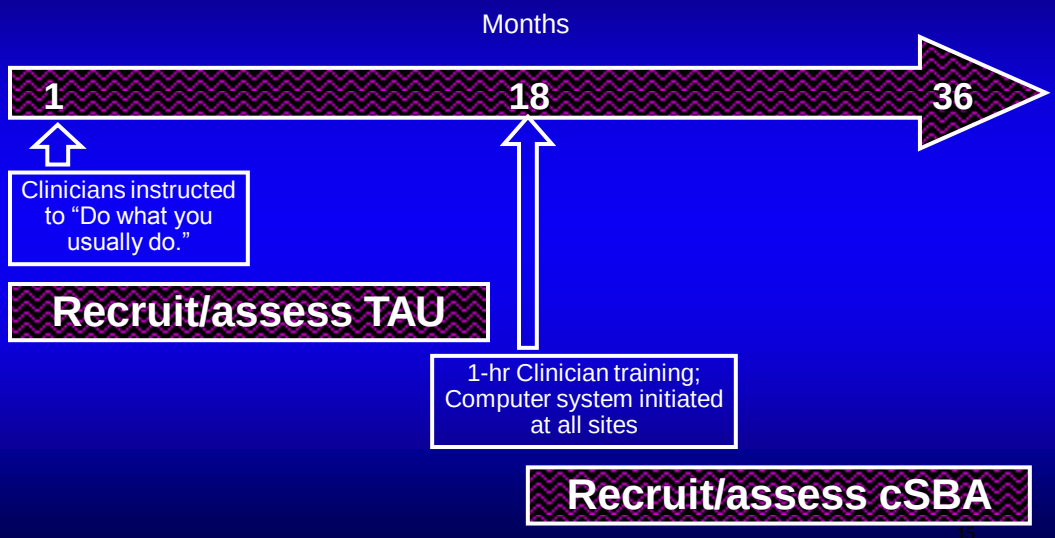
Offices of Study Pediatricians in Prague



Study Design (2005-2009)
Quasi-Experimental Comparative Effectiveness Trial



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Intervention: cSBA

Computer-facilitated system included:

- CRAFFT screen* and display of patient's score and risk level
- 10 pages of scientific information and true-life stories showing harmful effects of substance use
- Clinician Report sheet with CRAFFT results and 'talking points' to prompt 2-3 minute discussion with teen; given to clinician before visit

* Knight JR, et al,., Arch Pediatr Adolesc Med, 2002(Jun);156(6):607-614.

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Interaktivní dotazník **CRAFFT**

Přivítání | Dotazník CRAFFT | Výsledek | Informace pro tebe

Drogy a alkohol ovlivňují tvůj mozek a mohou jej doživotně poškodit.

Drogy a alkohol mohou ovlivnit paměť, koordinaci, rozhodování, učení a mohou způsobovat deprese.

Přejeďte myší přes text a sledujte, jak se změní obrázek.

Oblast mozku	Vliv drog
Čelní lalok	vede k problémům při rozumném rozhodování
Bazální ganglie	zhoršuje koordinaci, zpomaluje reakce
Podvěsek mozkový	zapříčiňuje ztrátu krátkodobé paměti
Mozeček	ovlivňuje rovnováhu a koordinaci
Motorické oblasti mozkové kůry	zvyšuje riziko infarktu u mladých uživatelů alkoholu a drog

DALŠÍ »

[1]Eldreth DA, Matochik JA, Cadet JL, Bolla KI. Abnormal brain activity in prefrontal brain regions in abstinent marijuana users. Neuroimage. Nov 2004;23(3):914-920.

[2]Moselhy HF, Georgiou G, Kahn A. Frontal lobe changes in alcoholism: a review of the literature. Alcohol Alcohol. Sep-Oct 2001;36(5):357-368.

[3]Daumann J, Fischermann T, et al. Memory-related hippocampal dysfunction in poly-drug ecstasy (3,4-methylenedioxymethamphetamine) users. Psychopharmacology (Berl). Aug 2005;180(4):607-611.

[4]National Institute on Drug Abuse. Research Report Series.

CRAFFT *Interactive*

Welcome | CRAFFT Questions | Score | Information for You

Alcohol can hurt your liver.

Drinking can scar your liver, and this can begin during the teen years.

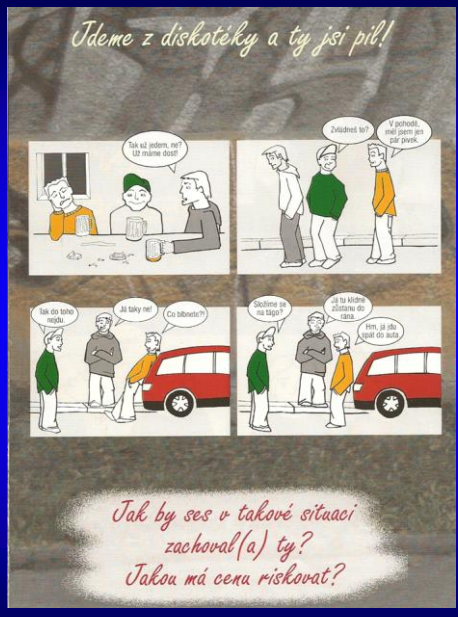
- More than 2 million Americans suffer from alcohol-related liver disease.
- Some drinkers develop alcoholic hepatitis, or inflammation of the liver.
  - This can result in fever, jaundice (abnormal yellowing of the skin, eyeballs, and urine), abdominal pain, death.
- About 10 to 20 percent of heavy drinkers develop alcoholic cirrhosis, or scarring of the liver.
  - This can cause death, even if drinking stops.

Cirrhosis

See alcohol-damaged liver

NEXT »

[1]Mann RE, Smart RG, Govoni R. The epidemiology of alcoholic liver disease. Alcohol Res Health. 2003;27(3):209-219.



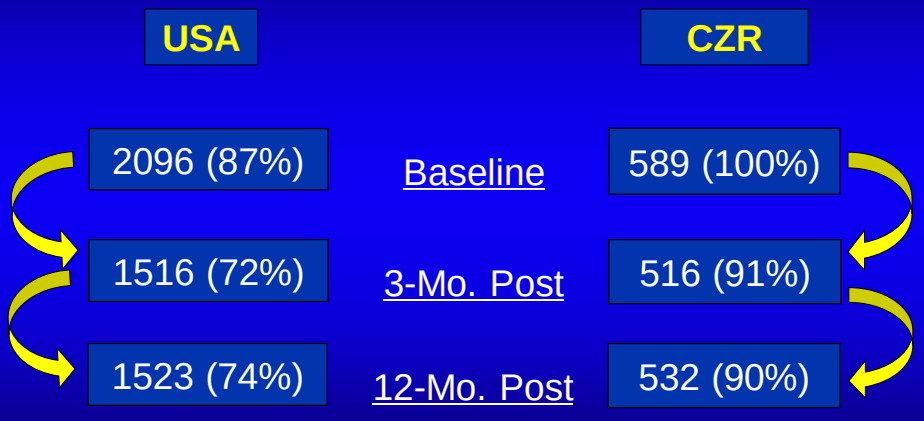
Control: Treatment as Usual (TAU)

- Could already include substance use screening and advice
- Some sites in the USA already used paper/electronic templates with CRAFFT or other such screening tool

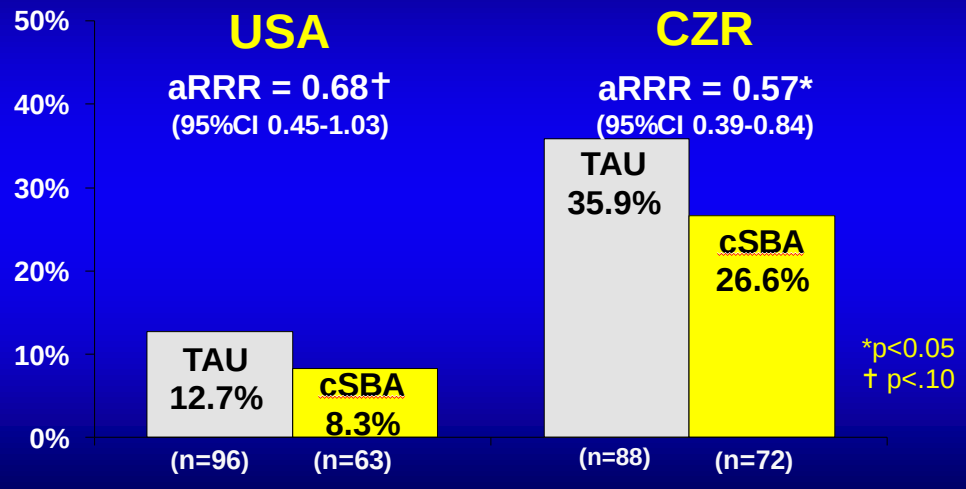
Methods Summary

- Participants: 12-18 yrs old arriving for routine care
- Measures: Past-90-day Timeline Follow-Back (TLFB) calendar interview and a single yes/no question about any past-12-month use.
- Data collection: Baseline, 3, and 12 months follow-ups
- Analysis: GEE logistic regression

Sample Sizes



Results: Percent HED at 3 Months Follow-up



aRRR=adjusted Relative Risk Ratio (95% Confidence Interval);
Adjusted for baseline HED, demographics, peer/family substance use, site/clinician/visit characteristics, and multi site sampling

3-Months Results stratified by Baseline HED

* p<0.05; † p< 0.10

Baseline past-90-days HED days	USA aRRR (95%CI)	CZR aRRR (95%CI)
None	0.72 (0.42-1.23)	**0.52* (0.29-0.92)**
1-2 Days	**0.59† (0.33-1.04)**	**0.74† (0.52-1.04)**
3+ Days	1.10 (0.83-1.46)	0.97 (0.81-1.18)

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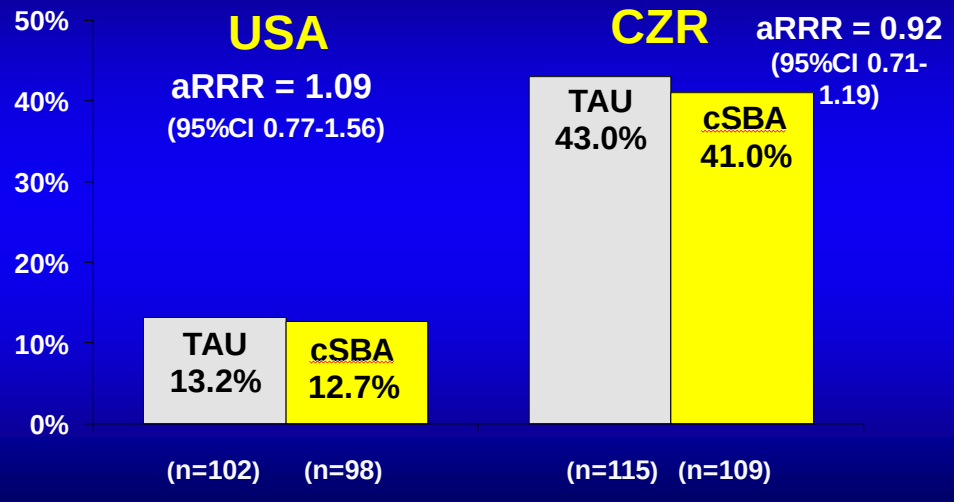
3+ Days	1.10 (0.83-1.46)	0.97 (0.81-1.18)

Results: Percent HED at 12 Months Follow-up



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Discussion

- Preliminary evidence that a brief primary care intervention can help to reduce the HED rates among adolescents
- Future studies needed to replicate findings and test strategies to extend effect

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Limitations

- Sites only in New England and Prague
- Quasi-experimental design; US groups not equivalent at baseline
- Self-reported data

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Implications

- Alcohol misuse is the leading risk factor for premature death and disability
- A brief primary care intervention could help reduce this key threat to adolescent safety and health

1. NIAAA, 2014. Alcohol Facts and Statistics

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Conclusion

cSBA in primary care appears promising as a practical and efficacious way to reduce adolescents' heavy episodic drinking

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www.ceasar.org/isbirt
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