Screening, Brief Interventions, and Referral for Treatment (SBIRT)

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Acknowledgements

Some of the work presented was funded by the National Institute on Disability, Independent Living and Rehabilitation Research
A Model for Systems Response to Address Substance Misuse after TBI (Corrigan, 2005)
Traumatic Brain Injury

4 Quadrant Model of Services

Quadrant I
Acute Medical Settings and Primary Care
Screening & Brief Interventions

Quadrant II
Rehabilitation Programs & Services
Education, Screening, Brief Interventions & Linkage

Quadrant III
Substance Abuse System
Screening, Accommodation & Linkage

Quadrant IV
Specialized TBI & Substance Abuse Services
Integrated Programming

High Severity
Substance Use Disorder
Low Severity

High Severity
Traumatic Brain Injury
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Traumatic Brain Injury

High Severity

Substance Use Disorder

Low Severity
Screening, Brief Intervention (SBI) and Referral for Treatment (SBIRT)

- Standard of care for trauma patients:
  - American College of Surgeons has required SBI since 2007

- Usually consists of:
  - Screening for risk of substance misuse
  - Feedback and education regarding risks
  - Brief motivational interview
  - Referral for treatment for more severe substance misuse
FRAMES Study
Gentilello, Rivara, Donovan, Jurkovich, et al. (1999)

• 762 Level 1 trauma patients who screened positive for problem alcohol use

• 12 months later those receiving SBI:
  – Reduced alcohol consumption by 21.8 drinks/wk. (vs. 6.7 for the control group)
  – SBI group had 47% reduction in ER or trauma admissions

• 3 years later, SBI group had 48% reduction in injuries requiring hospitalization
APPLICATION OF SBI TO TRAUMA PATIENTS WITH TBI
Screening and Brief Intervention for Substance Misuse Among Patients With Traumatic Brain Injury

John D. Corrigan, PhD, Jennifer Bogner, PhD, Daniel W. Hungerford, DrPH, and Katherine Schomer, MA
Systematic Review of SBI for Determining Applicability to Patients with TBI

- Reviewed studies that evaluated SBI in trauma units or emergency departments, published in English since 1985
- Both experimental and non-experimental studies
- 174 articles found, 26 met inclusion criteria
Exclusion of Persons with TBI

• 2 Trauma unit studies excluded persons with TBI whose impairments did not resolve before discharge from the unit.
• 18 Studies excluded persons with cognitive impairment due to inability to consent or participate in the intervention; some required that mental status exam be passed.
• Remaining studies required informed consent from participant, so assumption is that participants had minimal cognitive impairment.
• Some patients with mild TBI may have been included, but those with moderate-severe TBI were likely excluded.
Cluster Randomized Effectiveness Trial: Zatzick, et al., 2014

- Tested a training intervention targeting trauma centers in a moderate level of readiness to comply with ACS mandate to conduct SBI with all trauma patients
- Compared patient and provider-level outcomes between sites that received enhanced training and those without training
Intervention

Enhanced training included:

• 1 day workshop on 20-30 minute MI session that could be delivered bedside

• Followed by 4 telephone based coaching sessions and written feedback

Control providers did not receive any formal training, but were free to access materials
Sample

- 5803 admissions with positive BAC
- 2501 met pre-screen criteria
- 1200 (48%) of these refused consent
- Additional subjects screened out after consent
- Final sample = 878, with 50% having sustained a TBI
Patient Outcomes

• Both intervention and control subjects reduced drinking
• MI skills, but not intervention time, mediated relationship
• Significantly more effective for patients without TBI versus those with TBI
SBI in Trauma Settings

• Modest effectiveness with the general population of patients with traumatic injuries
• Reduced to minimal effectiveness with persons with TBI of lower severity
• Not tested in persons with moderate-severe TBI
ADAPTED SBI WITH PERSONS WITH TBI
Adapting SBI to Persons with TBI

- Persons with TBI may not have the cognitive capacity to participate in SBI during acute care—need to provide access at later date
- Many people may not consider their premorbid substance misuse to be problematic, but may be more receptive to considering that it may be a problem AFTER injury due to effects on recovery
Ohio Valley Center presents a...

USER’S MANUAL

For Faster... More Reliable Operation of a Brain after Injury
Eight Educational Messages

1. People who use alcohol or other drugs after they have a brain injury don’t recover as much.

2. Brain injuries cause problems in balance, walking or talking that get worse when a person uses alcohol or other drugs.

3. People who have had a brain injury often say or do things without thinking first, a problem that is made worse by using alcohol and other drugs.

4. Brain injuries cause problems with thinking, like concentration or memory, and using alcohol or other drugs makes these problems worse.
Eight Educational Messages

5. After brain injury, alcohol and other drugs have a more powerful effect.

6. People who have had a brain injury are more likely to have times that they feel low or depressed and drinking alcohol and getting high on other drugs makes this worse.

7. After a brain injury, drinking alcohol or using other drugs can cause a seizure.

8. People who drink alcohol or use other drugs after a brain injury are more likely to have another brain injury.
Sander, Bogner, Nick, Clark, Corrigan, Rozzell, 2012

- RCT comparing standard of care (advice and referral n=94) to brief intervention (booklet, video and motivational interview, n=108)

- Trauma and rehab patients (complicated mild, moderate, severe TBI)
Sander et al., 2012

• Found no direct effect on alcohol misuse at 3 months
• Brief Intervention increased negative alcohol expectancies (in persons with more severe TBI)
Ohio Specific Analysis (trend)

Brief Intervention

Number of Facts Recalled

Beliefs/Attitudes

Abstinence
Tweedly, Ponsford, Lee (2012)

- Compared
  - a) Informal discussion (attention control) (n=20)
  - b) Video, Booklet only (n=20)
  - c) Video, Booklet+ Motivational Interview (n=20)
- Intervention 6 months post moderate-severe TBI
- Outcomes 12 months post
- Found:
  - No significant effects due to small sample size
  - Moderate effect suggested those in control group increased drinking, but those in experimental groups did not
Figure 3

Investigation of the Effectiveness of Brief Interventions to Reduce Alcohol Consumption Following Traumatic Brain Injury. Tweedly, Laura; Ponsford, Jennie; Lee, Nicole

Journal of Head Trauma Rehabilitation. 27(5):331-341, September/October 2012.
DOI: 10.1097/HTR.0b013e318262200a
Conclusions from Studies of SBI with persons with TBI

- Multimedia education appears to be the primary source of effects on knowledge and beliefs, with possible indirect effect on alcohol use.
- Methodological challenges.
- Need to further modify brief interventions to increase effects.
HOW CAN WE IMPROVE THE EFFECTIVENESS OF ADAPTED SBI?
Key Elements of SBI in General Population

- Screening and education most effective for people who have experienced negative consequences—*Take advantage of teachable moments*
- Adhere to motivational interviewing principles, including eliciting Change Talk and deterring Sustain Talk
- Brief, multi-contact interventions have the largest effect sizes
The Adapted SBI for TBI—Based on Lessons Learned

- Present within the context of a health and wellness intervention, the adapted SBI includes:
  - Screening
  - Multimedia Education: healthy tips, booklet and DVD
  - Brief intervention with accommodations
  - Telephone-based booster session
Health and Wellness Context

- Intervention begins with discussion of health and wellness using healthy habit tip sheet
- Intervention includes development of plan for brain health, including strategies to avoid substance use
Healthy Tips

Tips for a Safe and Healthy Life

Take steps every day to live a safe and healthy life.

Eat healthy.
- Eat a variety of fruits, vegetables, and whole grains every day.
- Limit foods and drinks high in calories, sugar, salt, fat, and alcohol.*
- Eat a balanced diet to help keep a healthy weight.

Be active.
- Be active for at least 2½ hours a week. Include activities that raise your breathing and heart rates and that strengthen your muscles.
- Help kids and teens be active for at least 1 hour a day. Include activities that raise their breathing and heart rates and that strengthen their muscles and bones.

Protect yourself.
- Wear protective gear when you are riding a bicycle.
- Call 911 to report injuries that need immediate medical attention.

*After TBI, alcohol should be avoided completely.
Screening: Is the person drinking at hazardous levels?

- **NIAAA Guidelines:**

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<td>&gt; 4</td>
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American Dietary Guidelines *add*....

• Abstain from alcohol when:
  – Pregnant or considering pregnancy
  – Unable to restrict drinking to moderate levels
  – When taking a medication that interacts with alcohol
  – *If a contraindicated medical condition is present*

• Abstain from illicit drugs
Screening Tools (examples)

- Alcohol Use Disorders Identification Test
- Alcohol, Smoking, and Substance Involvement Screening Test (WHO)
- Alcoholscreening.org
- CRAFFT (for adolescents: Car, Relax, Alone, Forget, Family/Friends, Trouble)
Education

- Place within context of health and wellness (Healthy Tips)
- Information related to individual’s risk of health effects
- TBI-specific effects of alcohol and drugs
  - Written information
  - Video
Video

- “Substance Use and Traumatic Brain Injury: Risk Reduction and Prevention”
- Developed by VISN-19 Mental Illness, Research, Education and Clinical Center (MIRECC)
Motivational Interview

• Goal-directed, person-centered method for assisting with resolving ambivalence and moving toward positive change

• Four principles;
  – Express empathy
  – Roll with resistance
  --Develop discrepancy
  --Support self-efficacy
Motivational Interview: Visual Aids

• Readiness Ruler

On a scale of 1 to 10 with 1 being not important at all and 10 being very important, how important is it that you **not** use alcohol or other drugs?
Accommodations

• Written plan
• At least one environmentally embedded reminder
• Menu of accommodations:
  – Use of devices to remind of strategies
  – Memory books and reminders around home
  – Use of bracelet or other jewelry as reminder
  – Patient generated accommodations
Accommodating the Symptoms of TBI

Presented by:
Ohio Valley Center for Brain Injury Prevention and Rehabilitation

With contributions from Minnesota Department of Human Services State Operated Services

Developed in part with support of a grant from the US Department of Health and Human Services, Health Resources and Services Administration (HRSA) to Ohio Rehabilitation Services Commission and The Ohio State University
Booster Session

• Begins where initial intervention left off
• Review plan for brain health
• Review and modify accommodations
• Make referrals as needed
Summary

• Take advantage of teachable moment for interventions
• Ongoing provider relationships have the advantage of offering multiple contacts
• Education regarding effects of substance misuse on recovery and sequelae of the injury can change attitudes and beliefs, which could change behavior
• Additional accommodations are needed to secure behavior change
(Current) SAMSHA Cooperative Agreements for SBIRT in States

- Indiana
- North Carolina
- Tennessee
- Illinois
- Colorado
- Connecticut
- New York
- Washington

- Arizona
- Iowa
- New Jersey
- New Mexico
- Vermont
- South Carolina
- Ohio
Additional Resources

- Ohio Valley Center for Brain Injury Prevention and Rehabilitation: Ohiovalley.org
- Brainline.org
- VISN-19 MIRECC: http://www.mirecc.va.gov/MIRECC/visn19/