Behavioral Screening and Intervention: A Critical Component of Primary Care and Behavioral Health Integration

Richard L. Brown, MD, MPH
Director of WIPHL
Professor of Family Medicine
University of Wisconsin
School of Medicine and Public Health
rlbrown@wisc.edu

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Richard L. Brown, MD, MPH - “Rich”

Tenured Professor of Family Medicine,
UW School of Medicine Public Health
NIH-funded researcher and award-winning teacher
Past President, Association for Medical Education and Research in Substance Abuse
Past Director, Project MAINSTREAM, a national program that enhanced substance abuse education for 10,000 health professional trainees
Director, Wisconsin Initiative to Promote Healthy Lifestyles

Disclosure

Dr. Brown is CEO and owner of Wellsys, LLC

Wellsys helps healthcare settings deliver BSI

Dr. Brown will give an unbiased presentation on BSI
The Problem:
>40% of Deaths and Most Chronic Disease

Prevalence – Michigan Adults

The Problem:
>40% of Deaths and Most Chronic Disease

**Prevalence – Michigan Adults**

![Bar chart showing prevalence of different health behaviors among Michigan adults.](image)


Limited Effectiveness of Interventions

- Brief advice can increase fruit & vegetable intake
- No demonstrated improvements in health outcomes

- Brief intervention → 1 in 12 previously sedentary, healthy adults meet physical activity recommendations

- Best results from intensive, structured, long-lasting programs
- Average 9 to 15 pound weight loss
- Slight improvements in BP, lipids and glucose
- No demonstrated improvements in cardiovascular outcomes


The Problem:
>40% of Deaths and Most Chronic Disease

**Prevalence – Michigan Adults**

![Bar chart showing prevalence of different health behaviors among Michigan adults.](image)


Highest ROI for BSI
Tobacco use poses risk for

- Heart disease
- Stroke
- Chronic lung disease
- Respiratory infections
- Reproductive
  - Miscarriage, stillbirth
  - Prematurity
  - Low birthweight
- Cancers
  - Lung
  - Mouth, lips, nose
  - Larynx, pharynx
  - Esophagus, stomach
  - Pancreas
  - Kidney, bladder
  - Uterine cervix

Common Alcohol/Drug-Related Conditions

Alcohol & drugs cause ...
- Injury & disability
- Viral hepatitis
- HIV/AIDS
- Other STIs
- Unplanned pregnancies
- Poor birth outcomes
- Psychiatric disorders

Alcohol causes ...
- Hypertension
- Dyslipidemia
- Heart disease
- Stroke
- Neuropathy
- Dementia
- Cancers
  - Oropharynx
  - Esophagus
  - Breast
  - Liver
  - Colon
  - Hepatitis
  - Pancreatitis

Alcohol impedes tx for ...
- Hypertension
- Dyslipidemia
- Diabetes
- GERD & other GI disorders
- Sleep disorders
- Depression
- Anxiety disorders
- Psychoses
- All chronic diseases

Proportion of Events Involving Alcohol/Drugs

- Crime
  - Homicides - 46-86%
  - Sexual assaults - ≤60%
  - Other assaults - 37-40%
- Incarceration
  - Adults - 65%
  - Juveniles - 67% (41% alcohol)
- Suicides - 20-37%
- Falls - 44%
- Drownings - 69%
- Fires - 26%
- Child abuse/neglect - 70%
- Domestic violence - ?
- Unintended pregnancies and STIs - ?
- Fetal alcohol spectrum disorders - 100%

Moore & Gerstein, 1982; Chesson, 2000; Winters, 2003; Rooney & Hargarten, 2007; Reid, Macchetto, & Foster 1999
Binge Drinking, Drug Use, and Employment

US Binge Drinkers - 2010

Employed 75%

US Adult Drug Users - 2010

Employed 66%

receipt of treatment for alcohol/drug disorders* – michigan adults –

<table>
<thead>
<tr>
<th></th>
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<th>Drugs</th>
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<tbody>
<tr>
<td>No disorder</td>
<td>92.51%</td>
<td>97.75%</td>
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<tr>
<td>Disorder*</td>
<td>7.49%</td>
<td>2.25%</td>
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<td>Treated</td>
<td>0.39%</td>
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*Disorders = Abuse and Dependence

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Annual costs in the United States (billions of dollars)

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<thead>
<tr>
<th></th>
<th>Healthcare</th>
<th>Productivity</th>
<th>Justice, Social, Crashes</th>
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<tbody>
<tr>
<td>Tobacco Use</td>
<td>$96B</td>
<td>$25B</td>
<td>$11B</td>
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<tr>
<td>Risky Drinking</td>
<td>$97B</td>
<td>$161B</td>
<td>$120B</td>
</tr>
<tr>
<td>Drug Use</td>
<td>$61B</td>
<td>$11B</td>
<td>$51B</td>
</tr>
<tr>
<td>Depression</td>
<td>$35B</td>
<td>$52B</td>
<td>$26B</td>
</tr>
<tr>
<td>Obesity</td>
<td>$147B</td>
<td>$73B</td>
<td>$688B</td>
</tr>
<tr>
<td>MI: &gt;$28B</td>
<td>$908B</td>
<td>$305B</td>
<td>$503B</td>
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Comorbidity in Dual Eligibles: Behavioral Disorders and Chronic Disease

Hypertension
- None: 31%
- Mental Health Disorder: 52%
- Alc/Drug Disorder: 4%
- Both: 13%

Diabetes
- None: 32%
- Mental Health Disorder: 54%
- Alc/Drug Disorder: 3%
- Both: 11%

CHD
- None: 26%
- Mental Health Disorder: 53%
- Alc/Drug Disorder: 4%
- Both: 17%

CHF
- None: 30%
- Mental Health Disorder: 48%
- Alc/Drug Disorder: 6%
- Both: 16%

COPD/Asthma
- None: 24%
- Mental Health Disorder: 51%
- Alc/Drug Disorder: 5%
- Both: 21%

Comorbidity in Dual Eligibles: Annual Per-Capita Hospitalizations

Comorbidity in Dual Eligibles: Annual Total Cost of Care

Boyd C, Faces of Medicaid Data Brief, Center for Health Care Strategies, December 2010
Costs to Employers – Per Employee Per Year

- $3,747 - healthcare & productivity
- Double for healthcare
  Triple for workplace injuries
- $3,000 - $4,000 - healthcare & productivity

Outline

- The problem
- A solution: Behavioral Screening and Intervention (BSI)
- BSI effectiveness, cost savings and endorsements
- BSI, primary care/behavioral health integration and wellness
- BSI: WIPHL's experience
- Summary
**B**

**S** for Screening

In clinics:

- Patients complete screen while waiting
- MA reviews screen
- Health educator sees patient at that visit

In EDs & hospitals, health educators introduce themselves and deliver services

**I** for Intervention

The health educator ...

- Builds commitment to change through motivational interviewing
Motivational Interviewing

Avoids
- Dispensing unwanted advice and information
- Using scare tactics
- Twisting arms
- Shaming
- Eliciting denial and resistance

Motivational Interviewing

Engages patients in
- Learning about risks and consequences that they find important
- Weighing pros & cons of behavior in light of their goals & values
- Making the best decisions for themselves on whether and how to change

*Hundreds of studies on a variety of behaviors prove the effectiveness of MI*

for Intervention

The health educator ...
- Builds commitment to change through motivational interviewing
- Supports change by helping patients design and optimize change plans
**Behavior Change Plans**

- Limits
- Triggers
- Strategies to avoid or manage triggers
- Other activities
- Environmental changes

**Medications**
- Social supports
  - professional and lay
- Self-rewards
- Contingency plans
- Follow-up

*Dozens of studies on a variety of behaviors have proved effectiveness*

---

**The health educator...**

- Builds commitment to change through motivational interviewing
- Supports change by helping patients design and optimize change plans
- Delivers collaborative care for depression

---

**Collaborative Care for Depression**

- Measures severity of depression
- Educates about depression and instills optimism
- Promotes behaviors that reduce depressive symptoms
- Refers for medications and/or counseling
- Promotes adherence to treatment
- Reassesses severity periodically and alerts providers when treatment is inadequate

*69 studies have shown effectiveness*

Collaborative care also seems to be effective for patients with:
- Bipolar disease
- Anxiety disorders
- Multiple disorders
I for Intervention

The health educator ...

- Builds commitment to change through motivational interviewing
- Supports change by helping patients design and optimize change plans
- Delivers collaborative care for depression
- Makes referrals to other resources – as healthcare settings direct
- Offers follow-up sessions

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Effectiveness of Tobacco Screening & Intervention

<table>
<thead>
<tr>
<th>12-Month Quit Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Screening</td>
</tr>
<tr>
<td>3%</td>
</tr>
</tbody>
</table>

- Up to 5 hours of one-on-one counseling over >8 visits
- Physicians and non-physicians obtain similar quit rates
- Medication and counseling
Alcohol Problems: The Old View

- Not dependent
- Addiction
- Abstinence x 1 mo
- Abstinence x 2 yr
- Loss of control
- Cravings
- Preoccupation

Drinking and Drug Use Continuum

- Abstinence
- Low risk
- High risk
- Problem use
- Loss of control
- Cravings
- Preoccupation

Risky Drinking

- Standard drinks

- Any occasion

- Per week

- Any occasion

- Per week
Drinking and Drug Use Continuum

- Loss of control
- Cravings
- Preoccupation
- Dep

27% 3%

Cause most harm in workplaces and communities

Abstinence
Low risk
High risk
Problem use

Effectiveness of Brief Alcohol Interventions

- Candidates: 27% of Michigan adults –

ED visits
Injuries
Hospitalizations
Arrests
Crashes

20% 33% 37% 46% 50%

National Business Group on Health, Guide to Preventive Services

Chief Wray: Please deliver BSI!
Effectiveness of Collaborative Care

- A meta-analysis of 69 randomized controlled trials shows effectiveness
- One-year results of Project DIAMOND

<table>
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<tr>
<th>Treatment Response at One Year</th>
<th>Complete Remission at One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>(50% reduction in PHQ-9 scores)</td>
<td>(PHQ-9 Score of ≤4)</td>
</tr>
<tr>
<td>Usual care</td>
<td>34%</td>
</tr>
<tr>
<td>+ Collab Care</td>
<td>70%</td>
</tr>
</tbody>
</table>

Thota, American Journal of Preventive Medicine, 2012; Institute for Clinical Systems Improvement, www.icsi.org

Cost Savings of BSI

- Alcohol
  - $523 reduction in healthcare costs per risky drinking patient due to averted hospital admissions and ED over the next year → 400% ROI
  - $4,392 reduction in total healthcare costs per dual-eligible patient who received an alcohol or drug intervention in an ED over the next year
- Depression - $5,200 healthcare cost savings in the four years following a $900 investment in delivery of collaborative care in Year 1 → 480% ROI
- Tobacco - ROI is believed to be even greater over several years
- Employers - Save $895 per employee who receives screening and other services as appropriate - ↓ healthcare costs, ↑ productivity, ↓ workplace injuries over the next year

Kizer, Medical Care, 2000; Estes, Medical Care, 2010; Unutzer, American Journal of Managed Care, 2008; Unutzer, Testimony to CMS, 2012, unpublished; National Commission on Prevention Priorities, www.prevent.org

BSI: Endorsements

- CDC
- National Business Group on Health
- National Institutes of Health
- ONDCP
- Wisconsin State Council on Drug Abuse
- Business Health Care Group
- The Alliance
- WMC
- Wisconsin Medical Society
BSI: Endorsements

All Americans should receive tobacco, alcohol and depression screening and intervention services

Tobacco and alcohol screening and intervention prevent more deaths, disease and injury and reduce healthcare costs more than screening for:
• All cancers
• High blood pressure
• High cholesterol
• Diabetes

Behavioral Screening and Intervention

The biggest step a clinic or hospital can take toward the triple aim:

• Improve health outcomes
• Enhance patient experience
• Control healthcare costs

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BSI: The Front End of PC/BH Integration

<table>
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<tr>
<th>Tier</th>
<th>Unhealthy Behaviors</th>
<th>Mental Health Disorders</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Screening</td>
<td>Brief Assessment</td>
</tr>
<tr>
<td></td>
<td>Motivational Interview</td>
<td>Behavioral Activation</td>
</tr>
<tr>
<td></td>
<td>Change Planning &amp; Support</td>
<td>Collaborative Care</td>
</tr>
<tr>
<td>2</td>
<td>Rx – Physician, Psychiatrist, NP/PA</td>
<td>Other Specialists, Treatment Programs, Psychotherapy</td>
</tr>
</tbody>
</table>

Benefits of Tier 1:
- Earlier recognition, less expensive intervention, and fewer costly consequences
- More efficient utilization and better access to scarce and costlier Tier 2 resources

Brown, Population Health Management, 2011

Everyone Wins with BSI!

Patients & Communities
- Improved health
- Stronger families
  - Less stress
  - Better role modeling
- Less crime & violence
- Less intoxicated driving, fewer crashes

Healthcare Providers
- Enhanced effectiveness in preventing and treating chronic illness
- Reduced burden
- Fulfills dozens of NCQA PCMH criteria
- Meets growing numbers of quality measures
- Addresses risk factors for readmissions and poor surgical outcomes
- Helps hospitals address ACA requirements for mental health parity and community health assessment and planning

Healthcare Purchasers
For employers:
- Lower healthcare costs
- Higher productivity
- Fewer absences and injuries
For local & state governments:
- Reduced burden on
  - Law enforcement
  - Courts and corrections
  - Social services
  - Healthcare budgets

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Two federally funded projects:
- $14M since 2006
- Helped 44 clinics deliver BSI
- Screened 113,642 patients
- Delivered 23,407 interventions

Results:
- Patient satisfaction: 4.2 to 4.9 of 5 points
- 20% Binge drinking
- 15% Marijuana use
- 55% Depression symptoms

Wisconsin Initiative to Promote Healthy Lifestyles

Wisconsin Initiative to Promote Healthy Lifestyles

http://www.innovations.ahrq.gov/content.aspx?id=3815;

“an effective innovation”
“a model for public-private collaboration”

Progress Toward Financial Sustainability

≥13 commercial plans and Medicaid reimburse for BSI

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<tr>
<td>Commercial</td>
<td>99408 &amp; 99409</td>
<td>99406 &amp; 99407</td>
</tr>
<tr>
<td>Medicaid*</td>
<td>–</td>
<td>H0049 &amp; H0050</td>
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* Reimbursement policy: Google “Wisconsin Medicaid SBIRT”

10 clinics continued services after grant funding expired
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**Summary - BSI: A Win for Everyone**

- Behavioral risks and disorders are common and costly
- Hundreds of studies: BSI is effective
- WIPHL: BSI is logistically and financially feasible
- BSI would benefit ...
  - Patients
  - Families
  - Employers & taxpayers
  - Communities & gov'ts
  - Healthcare providers
  - Patient-centered medical homes
  - Accountable care organizations
  - Hospitals

rlbrown@wisc.edu
You're Invited!

WIPHL September Symposium
Monona Terrace, Madison
Tuesday, September 17
Free of charge
Lunch and refreshments provided

Goal:
How can we make BSI routine in all Wisconsin clinics and hospitals?

http://www.wiphl.org/media/WIPHL_September_Symposium_Agenda_-_FINAL.pdf