Behavioral Health-Works

- Youth Suicide Prevention in Primary Care
- Office of Mental Health and Substance Abuse Services, Pennsylvania Department of Public Welfare
- Funded by SAMHSA through the Garrett Lee Smith Memorial Act
BH-Works: Four Assumptions

- Screening for mental health problems allows for early identification of children and adolescent at risk. Results: improve care and reduce cost.

- Screening for suicide should take place in the context of screening for general mental health problems.

- Introduction of a screening tool requires a broader systems assessment of capacity and resources. On the front end, providers need institutional support and training. On the back end, providers need better access to care.

- Technology solutions can help resolve barrier to implementation
Five Central Aims

# 1: Create state and local stakeholder groups

# 2: Increase coordination between medical and behavioral health services

# 3: Provide suicide “gatekeeper” training

# 4: Provide web-based screening tool
Aim # 1: Stakeholder Involvement

Stakeholder Involvement
State-Level
Community-Level
State and County Level Stakeholders

State Agencies:
- Dept. of Welfare and Dept. of Health

Medical Associations:
- PA Chapter of the American Academy of Pediatrics, PA Association of Family Physicians, PA Coalition of Nurse Practitioners, PA Association of Community Health Centers

Behavioral Health:
- Pennsylvania Community Providers Associations

Payers:
- Access Plus, Community Care

Local MH/HR directors, county suicide task forces, funded liaison between MH and PCP.
Aim # 2: Coordination of Behavioral Health & Medical Services

Stakeholder Involvement

- State-Level
- Community-Level

Coordination of Medical and Behavioral Health Services
State Survey Results (N=667 PCPs)

- 78% have referred at least 1 adolescent patient to MH services for suicidal ideation or attempts in the past year.

- Most practices have no in house MH worker.

- 45% report they cannot get quick MH appointments for suicidal patients and encounter long waiting lists for non-urgent patients.

- 24% report that the MH provider always or often lets them know if a patient attends services.
Coordination of Services

- Improve the relationship and exchange of information between PCPs and behavioral health providers and agencies
- Educate PCP about the MH system
- Exchange release of information forms
- Invite MH providers to a meeting at the PCP office
- Create directory of mental health providers
- Set up procedures for referral process and feed back
- Send the BHS report to the MH provider.
Aim # 3/4: Gatekeeper Training

- Stakeholder Involvement
  - State-Level
  - Community-Level

- Coordination of Medical and Behavioral Health Services

- Training
  - PCPs
  - Behavioral Health Providers
Why Training?

- PCPs get very little training on suicide and mental health
  - Less than 50% of PCPs feel competent in diagnosing depression

- Physician education increases PCPs feelings of capability and competency which leads to increased identification rates of high risk youth

- Physician education is one of only two suicide prevention strategies shown to reduce the suicide rate (Mann et al., 2005)
Recognizing and Responding to Suicide Risk in Primary Care (RRSR-PC-Y)

- Developed by the American Association of Suicidology
- Covers material pertinent to PCPs
- Designed as a 90-minute presentation
  - Now available as a 70-minute online presentation
- Includes lecture, video demonstrations of techniques, and printed resources
Content of RRSR-PC-Y

- Suicide risk assessment
- Triage decision making
- Crisis Response Planning
- Interventions for Primary Care
- Documentation
Other Trainings

- State wide webinars
- Brief training on depression, anxiety, trauma, adolescent and parent engagement
- In-services from the local MH providers
- On going consultation regarding complicated cases
Aim # 5: Web-based Screening

- Stakeholder Involvement
  - State-Level
  - Community-Level
- Coordination of Medical and Behavioral Health Services
- Training
  - PCPs
  - Behavioral Health Providers
- Screening
Behavioral Health Screen – Primary Care (BHS-PC)

- Screens for risk behavior and psychiatric symptoms
- Clinically validated scales (ages 12-24)
- Standardizes screening questions across patients and provider.
- Covers areas recommended by the American Academy of Pediatrics as best practice guidelines for a well-visit interview
- Takes 7 - 10 minutes
- English, Spanish, Korean, or Mandarin
- Now have Adult version
- Can track changes over time.
Key Domains of BHS-PC

- Medical
- School
- Family
- Substance Use
- Sexuality
- Nutrition and Eating
- Bullying
- Anxiety
- Depression
- Suicide and Self-Harm
- Psychosis
- Trauma
- Safety and Access to Guns
Web-Based Screening

Benefits

- Adolescents more likely to report on screen than face to face
- Lower cost, greater dissemination and accessibility
- Automatic skips shorten administration
- Automatic scoring eliminates mistakes & saves time
- Instant Report Generation and availability
- Can interface with patient EMR
Trending Reports

- Track Patient Over Time (up to 12 screens)
- Easily Identify Trends (depression, suicide, anxiety, traumatic distress, substance abuse, eating disorders))
- Quality Improvement & Outcomes
Validity of the BHS-PC

- The psychiatric scales are valid and predictive of risk behaviors (Diamond et al., 2010)
- Strong Internal Consistency
  - Range: 0.75-0.87, $a \geq 0.75$
- Strong Convergent Validity
  - BHS suicide risk and SSI, $r = .72$, $P < .0001$
- Strong Divergent Validity
- More than adequate specificity and sensitivity (see table)
SPRC Best Practice Registry

- Currently Under review
Screen Results

- Summary Results Immediately Identify:
  - Critical Items (e.g. Suicidality)
  - Scores and Clinical Significance
  - Risk Behaviors (Substance Abuse)
  - Strengths (Exercise/Work)
- Streamlines Assessment, Referral, & Treatment
- Aggregate Measures for Quality Improvement & Outcomes Reporting
BHS Workflow

1. Screen all Patients regularly OR Patient or Student seen or identified.

2. If BHS is elected, Staff gives orientation. Logon is created if needed.

3. Patient completes BHS in a Private Setting (< 10 min)

4. Clinical staff prints and adds the report to patient chart or EMR

5. Provider reviews report with patient and makes referrals if needed

6. Report and provider’s review may be billable

BHS is offered
Functionality under development

- Host mental health training videos
- Add other measures into the platform
- Electronic, searchable directory of mental health providers
- Text messages reminders to families to attend treatment and report on attendance
- Establish HIPPA protected communication between providers and family
Comparison with Teen Screen

A Side-by-Side Comparison

- Web-based
- Aggregate & Trending Data
- Applicable to Other Settings
- Extra Domains

<table>
<thead>
<tr>
<th>Area/Feature</th>
<th>Teen Screen</th>
<th>BH-Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-based (i.e. can access on any computer or device)</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Aggregate Data for Report Writing &amp; QI projects</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Automatically Scored Reports (Real-time)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ages</td>
<td>11 - 18</td>
<td>12 - 24</td>
</tr>
<tr>
<td>Genders</td>
<td>Male, Female</td>
<td>Male, Female</td>
</tr>
<tr>
<td>Settings</td>
<td>School, Primary Care</td>
<td>School, Primary Care, Emergency Department, Mental Health Clinics, and Universities</td>
</tr>
<tr>
<td>Domains</td>
<td>Depression, Anxiety, Alcohol/Substance Abuse, Suicide, Health Problems</td>
<td>Depression, Anxiety, Sub stance Abuse, Suicide &amp; Self Harm, Psychosis, Sexuality, Medical, School, Family, Traumas, Nutrition &amp; Eating, Bullying</td>
</tr>
<tr>
<td>Languages</td>
<td>English, Spanish</td>
<td>English, Spanish, Mandarin</td>
</tr>
</tbody>
</table>
Progress & Outcomes

- Stakeholder Involvement
  - State-Level
  - Community-Level
- Coordination of Medical and Behavioral Health Services
- Training
  - PCPs
  - Behavioral Health Providers
- Screening

Evaluate Outcome and Report Back to Stakeholders
Screening Progress To Date

• 12 participating sites (15 additional sites have been newly added)

• 2,381 youth screened

• 284 (12.0%) endorsed having thoughts of killing themselves at some point in their life

• 87 (3.7%) had current ideation

• Of those identified at risk for suicide:
  • 8% were already in treatment
  • 21% refused services
  • 44% accepted their referral and went to services
### Other Behavioral Health Concerns

<table>
<thead>
<tr>
<th></th>
<th>Total # Screened</th>
<th>Suicide</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Trauma</th>
<th>Eating Disorder</th>
<th>Substance Abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,347</td>
<td>367 (15.6%)</td>
<td>874 (37.2%)</td>
<td>868 (37.0%)</td>
<td>533 (22.7%)</td>
<td>82 (3.5%)</td>
<td>79 (3.4%)</td>
</tr>
</tbody>
</table>
## Risk Factors and Gun Access (Total Screened N=1561)

<table>
<thead>
<tr>
<th></th>
<th>Access to Guns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depression n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>Severe (n=295)</td>
<td>30 (10.2)</td>
</tr>
<tr>
<td><strong>Anxiety n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>Significant (n=612)</td>
<td>76 (12.4)</td>
</tr>
<tr>
<td><strong>Suicide n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>History of Suicide, but not current (n=186)</td>
<td>34 (18.3)</td>
</tr>
<tr>
<td>Currently at risk for Suicide (n=66)</td>
<td>8 (12.1)</td>
</tr>
<tr>
<td><strong>Traumatic Distress n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>At risk for PTSD (n=378)</td>
<td>44 (11.6)</td>
</tr>
<tr>
<td><strong>Substance Abuse n(%)</strong></td>
<td></td>
</tr>
<tr>
<td>At risk for Substance Abuse problem (n=58)</td>
<td>9 (15.5)</td>
</tr>
</tbody>
</table>


## Cutters: with and without ideation

<table>
<thead>
<tr>
<th></th>
<th>NSSI Only (n = 70)</th>
<th>NSSI + Ideation (n = 77)</th>
<th>NSSI + Attempts (n = 56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17.59 (3.05)</td>
<td>17.87 (2.77)</td>
<td>18.13 (2.71)</td>
</tr>
<tr>
<td>% Female</td>
<td>78.6%</td>
<td>76.6%</td>
<td>69.6%</td>
</tr>
<tr>
<td>% White</td>
<td>82.9%</td>
<td>81.6%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Current Depression</td>
<td>1.34 (1.05)</td>
<td>2.07 (1.04)(^a)</td>
<td>2.11 (1.36)(^a)</td>
</tr>
<tr>
<td>Current Anxiety</td>
<td>1.93 (1.18)</td>
<td>2.45 (1.02)(^a)</td>
<td>2.58 (1.06)(^a)</td>
</tr>
<tr>
<td>Lifetime Traumatic Stress</td>
<td>.93 (1.18)</td>
<td>1.57 (1.60)(^a)</td>
<td>1.90 (1.51)(^a)</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>.25 (.65)</td>
<td>.42 (.75)</td>
<td>.66 (1.13)(^a)</td>
</tr>
<tr>
<td>Eating Disorder</td>
<td>1.00 (.86)</td>
<td>1.16 (.68)</td>
<td>1.08 (.88)</td>
</tr>
</tbody>
</table>

Note. Means and standard deviations (or percentages) are presented; NSSI = non-suicidal self-injury; diagnostic subscale scores are means and range from 0 – 4; \(^a\) significantly different from NSSI Only group at p < .05 based on Tukey HSD contrasts.
The Behavioral Health Screen in the Emergency Department at CHOP (7,000)

- A sustainability study
- Nurses were responsible for screening without assistance from research assistance
- 33% penetration for eligible patients
- Increased identification rates by 10%
- Penetration is now at 60%
Identification, Assessment and Referral
Pre-Post Pre-Implementation vs. Screened

Fein JA et al *Archives of Pediatric and Adolescent Medicine* 2010;164(12):1112-1117.
Summary and Main Findings

- 92% reported satisfaction with the model.
- Need a point person to help implement changes and screening.
- If PCP’s increase screening, they will increase identification rates. Then, MH providers will be more interested in coordinating, if not collocating, services.
- Reimbursing the PCP for screening would increase screening behavior.
For more information…

Guy Diamond, PhD
University of Pennsylvania
The Children's Hospital of Philadelphia (CHOP)
diamondg@email.chop.edu
215-590-7550

Tita Atte, MPH, CPH
Project Manager
The Children's Hospital of Philadelphia (CHOP)
attet@email.chop.edu
267-426-5104
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