Screening for Suicide Risk in the Pediatric Primary Care Setting

Matthew B. Wintersteen, Ph.D.

Thomas Jefferson University/Jefferson Medical College
Department of Psychiatry & Human Behavior
Division of Child & Adolescent Psychiatry

Presented September 9, 2008 – PA Suicide Prevention Conference, Grantville, PA
Adolescent Suicide

- Every year 1 in 5 adolescents contemplate suicide, 5-8% attempt suicide, and approximately 1,600 to 2,000 adolescents between the ages of 12 and 18 die by suicide.
- When you take into account non-lethal attempts, approximately one million teenagers attempt suicide each year.
- Completed suicide most commonly occurs in older adolescents, but have occurred in children as young as 6 years.
- 90% of those occur in those with psychiatric disorders
- In approximately half of those cases, the disease had been present for more than 2 years
2005 CDC Youth Suicide Data

- 14.5% increase in deaths by suicide in ages 10-19 year olds, following a 28% decline between 1990-2004.
  - First increase in 15 years
- 76% increase in 10-14 year old girls
- 32% increase in 15-19 year old girls
- 9% increase in 15-19 year old boys
- Hanging and suffocation account for over 50% of female suicide deaths
- Firearms still most common method of suicide in boys and young men

Pennsylvania and Youth Suicide

- Youth suicides have occurred in every PA county over last five years.
- In counties with population densities great enough to calculate suicide rates, 53% have suicide rates exceeding the national average.
- 15% of PA counties have suicide rates at least twice that of the national average.
Why Primary Care?

- Primary care is a potential source for identification, triage, and brief intervention (IOM, 2002)
- 70% of adolescents see their primary care provider (PCP) at least once per year (U.S. DHHS, 2001)
- Many at-risk subpopulations served (e.g., HIV, chronic illness, family planning)
- 77% of adolescents with mental health problems go see their PCP (Schurman et al., 1985)
- PCPs prescribe over 75% of all anti-depressants (Hylan et al., 1998), although this has declined since FDA warning

According to a sample of pediatricians, 16% of adolescents in the last year were depressed and 5% were at risk for a serious suicide attempt (Annenberg Adolescent Mental Health Project, 2003)

Over 70% of adolescents report a willingness to talk with a primary care physician about emotional distress (Good et al., 1987)

7-15% of adolescent suicide attempters contacted a health provider in the month previous to an attempt and 20-25% in the previous year (Groholt et al., 1997)

Less than 50% of PCPs feel competent in managing suicide (Annenberg Adolescent Mental Health Project, 2003)

Mental health was 1 of 6 research areas primary care providers felt were important (AAP, 2002)
Why Primary Care?

Summary:
- Primary care is an entry point for many youth in need of psychiatric care
- PCPs lack skills and resources to manage suicidal youth
- In short, there is a missed opportunity to increase identification, referral, and treatment of suicidal youth in primary care settings.
- There is a critical need for training medical staff, providing them triage and assessment resources, and helping them partner them with local mental health services (IOM, 2002; Johnson & Millstein, 2003).

Interface of Medical and Behavioral Health Services: A Paradigm Shift

- Despite the need for collaboration, there remains little continuity of care.
- Barriers to integration are numerous and include:
  - paradigm clash between how one views medical and behavioral health problems
  - lack of training in behavioral health
  - lack of assessment tools
  - lack of time to evaluated these more amorphous problems
  - stigma
  - lack of reimbursement
  - lack of resources to offer these patients (Gardner, et al., 2002; Romer & McIntosh, 2005; Epstein et al., 1998; Milne & Chesson, 2000).
Optimal Integration Requires...

- Medical staff education
  - Physician education as one of only two effective suicide prevention programs (Mann et al., 2005)
- Collocated and/or readily available services
  - Collocated care has been shown to increase patient satisfaction and adherence to treatment, as well as enhancing mental health outcomes (Katon et al., 1996; Vallely et al., 2007; Weinreb et al., 2007).
- Standardized screening for suicide risk
  - Standardized screening has resulted in a 219% increase in physicians inquiring about suicidal ideation and behavior with their patients.
  - Furthermore, there was a 392% increase in identification of youth who may be at-risk for suicide (Wintersteen, under review).

Problems Integrating Suicide Screening into Primary Care

- 46% of physicians feel competent identifying depression in adolescents (Annenberg Adolescent Mental Health Project, 2003)
- Less than 20% of adolescent suicide attempters are asked about suicidal behavior by a physician at a medical visit (Slap et al., 1992)
- Only about 23% of pediatricians and family medicine providers routinely ask about suicide and related risk factors (Frankenfield et al., 2000)
- Not enough time to sufficiently screen
- Lack of available services for referral
Barriers to Integration Lead to...

1. PCPs avoiding screening
2. Referral of non-imminent risk adolescents to EDs and CRCs

These lead to:
- Decreased patient safety (no screening)
- Unnecessary burden on families, ED, and Psychiatry staff
- Threats to doctor-patient relationship

Engaging Primary Care Providers in Suicide Prevention
Screening and Research
Getting Started

- Find collaborators in primary care who are also involved in clinical practice (e.g., clinic directors, attending physicians, social workers)
- Conduct focus groups
  1. Needs assessment – assess current practice (what support for behavioral health already exists?)
  2. Stakeholders’ input on feasibility of intervention, screening, etc.

Training of Medical Staff Providers

- Managing Suicidal Adolescents in Primary Care
  1. Epidemiology
  2. Assessment
  3. Triage (risk and protective factors)
  4. Immediate management of risk
  5. Suicide vs. Self-Injury
- QPR Training
- American Association of Suicidology Primary Care Suicide Prevention Training Task Force
Staying Involved in Primary Care

- Integrate into primary care setting
  1. Regularly attend meetings
  2. Accept some initial behavioral health cases outside of the study
- Continually assess and make modifications as needed to increase buy-in
- Throughout work, offer progress reports (e.g., number of adolescents in treatment, basic therapeutic outcomes)
- Provide ongoing feedback to providers about their patients (sign those HIPAA forms!!!)

Expanding to Other Primary Care Sites

- Use original collaborators to develop collaborators at new sites (buy-in!!!)
- Demonstrate established program (preferably with a treatment component)
- Show effectiveness of intervention in first site
Provider Concerns

- What do I do if I identify someone?
- Who will treat my patients?
- How do I manage these adolescents in the office?
- What will you do to help us?
  - Clinical support on triage and study inclusion
- How do I know this will help when the broader community mental health system has failed our patients?

What Was Learned?

- Generally, providers are invested in the behavioral health needs of their patients
- Many providers have lost faith in the behavioral health system
- Providers are frustrated by never hearing from behavioral health providers about their patients
- Providers do not feel comfortable tackling behavioral health treatment on their own
- Must be willing to go the extra mile to help out the primary care sites – they are often the ones who must “sell” your model to their patients
Screening for Suicide and Related Risk Factors

Suicide and Psychosocial Screening

- Screening must be broader than suicide alone.
- Several psychosocial screening models exist, but penetration into practice is low (e.g., Clark & Ginsburg, 1995; Lieberman, 1997; Pfaff et al., 2001; Pincus et al., 1995).

Screening tools:

- Alleviate discomfort addressing sensitive issues (Rhodes et al., 2001).
- Help physicians feel more comfortable screening for sexual risk behavior (Epstein et al., 1998).
- Increase detection of risk behaviors (Kurth et al., 2004).
- Maximize efficient use of time spent at the healthcare provider’s office (Tolan & Dodge, 2005).

Patients are likely to receive better preventive care after being screened for risk-taking or psychiatric problems (Klein, et al., 2001; Rhodes et al., 2001).
Limitations of Current Screening Tools

- Too specific – only address one domain (e.g., domestic violence, depression)
- Too long to be practical in primary care
- No single instrument is clearly superior in detecting suicidal youth (Goldston, 2004).

Behavioral Health Screening – Primary Care (BHS-PC)

- Web-based screening tool (can be stand alone computer, as well)
- Real time scoring
- Designed to be completed prior to appointment
- Takes 12-15 minutes to complete
- Follows “best practice” guidelines
Behavioral Health Screening – Primary Care (BHS-PC)

- Behavioral health items were designed around DSM-IV criteria for the following disorders:
  - Major Depression, Generalized Anxiety Disorder, Social Phobia, Posttraumatic Stress Disorder, Eating Disorders, Schizophrenia, Substance Use Disorders, and Smoking.
- Risk-taking modules were developed assessing:
  - school, family, safety, sexuality, and suicide
- 75 core questions with 44 embedded questions following positive endorsement of behavioral health items.

BHS-PC Development

- Extensive item development with a core advisory board consisting of:
  - psychologists
  - adolescent medicine physicians (Children’s Hospital of Philadelphia, Children’s Hospital of Pittsburgh, Lehigh Valley Hospital)
  - nurse practitioners and others
  - national advisory board of experts
Previous Work with BHS-PC

- Explored feasibility with 24 patients and physicians:
  - Adolescents liked the computer program, completed it in 10 minutes, understood the questions, said they reported honestly, and found it helpful.
  - Healthcare providers responded positively to using the screening tool printout during appointments and gave feedback and suggestions.

- Preliminary results of validation study indicate:
  - Subscales (substance impairment, anxiety, depression, trauma impact) demonstrate good internal consistency ($\alpha$'s range from .67 to .82)
  - Significant correlation between BHS subscale scores (depression, anxiety, and trauma impact) and standardized measures ($r = .41$ to .65, $p < .05$).
  - Six-week test-retest reliability of suicide items was high (Winer's $r = .96, p < .001$). These items were also correlated with suicidal ideation as measured by the Scale for Suicidal Ideation (Beck & Steer, 1991; $r = .60, p = .01$). Finally, the suicide items differentiated those with from those without a previous suicide attempt (Wilks' $\lambda = .63, p < .01$).

### BHS-PC Preliminary Psychometrics

<table>
<thead>
<tr>
<th>Behavioral Health Screen Subscale</th>
<th># of items</th>
<th>Cronbach Alpha</th>
<th>Validation Tool</th>
<th>Pearson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety (past 2 weeks)</td>
<td>8</td>
<td>.77</td>
<td>MASC</td>
<td>.58***</td>
</tr>
<tr>
<td>Anxiety (past year)</td>
<td>9</td>
<td>.82</td>
<td>MASC</td>
<td>.65***</td>
</tr>
<tr>
<td>Depression (past 2 weeks)</td>
<td>16</td>
<td>.73</td>
<td>BDI</td>
<td>.63***</td>
</tr>
<tr>
<td>Depression (past year)</td>
<td>2</td>
<td>.77</td>
<td>BDI</td>
<td>.51**</td>
</tr>
<tr>
<td>Trauma (Impact)</td>
<td>4</td>
<td>.67</td>
<td>TSCC</td>
<td>.41*</td>
</tr>
<tr>
<td>Substance Impairment</td>
<td>4</td>
<td>.79</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
Increased Identification from BHS-PC

- Initial 73 adolescents who volunteered to complete the BHS-PC and additional validation measures:
  - 34% were offered a referral
  - 7% who met criteria for a referral were already receiving services
  - 5% who met criteria for a referral refused the referral
- In a similar study in the CHOP ED, 3,775 adolescents (ages 14-18) were screened:
  - 9.6% identified and referred to social work (2.2% prior to screening tool)
  - 4.1% were offered a behavioral health referral (1.0% prior to screening tool)

Additional Goals for BHS-PC

- Web-based version developed for use in CHOP ED for HRSA grant (Joel Fein, MD, Principal Investigator)
  - BHS-ED is now standard clinical practice for adolescents age 14 and older
- Dissemination:
  - Planned Parenthood of the Greater Delaware Valley
  - National Nursing Centers Consortium, Philadelphia
  - The Pennsylvania Department of Health
  - Garrett Lee Smith Project
Results of Related Research:
Impact of Standardized Screening on Rates of Identification

Introduction of New Suicide Items into SHADSSSS Interview in Epic

- Old Model:
  - “Suicidality_________”

- New Model:
  - Introduction of 2 standardized questions
  - Default is “not asked”

- 3 month trial introduced in Adolescent Medicine (ADOL and ADFP), South Philadelphia, and Cobbs Creek
**New Suicide Questions**

- Have you ever felt that life is not worth living? (if yes then, has this feeling occurred in the past week?)
- Have you ever had any desire to kill yourself?
  - Did you ever make a plan to kill yourself?
  - Have you ever attempted suicide?
  - In the past week, including today, have you had any desire to kill yourself?
  - In the past week, including today, did you have a plan to kill yourself?
  - In the past week, including today, have you tried to kill yourself?

**Change in Rate of Inquiry**

The chart shows the change in the rate of inquiry pre-intervention and post-intervention for different groups (ADOL, ADFP, SP, CC). The overall increase in rate of inquiry is 219%.
Change in Identification

Overall Increase in Identification of 392%

Correspondence Regarding This Presentation May be Directed to:

Matthew B. Wintersteen, Ph.D.
Assistant Professor, Director of Research
Thomas Jefferson University/Jefferson Medical College
Department of Psychiatry & Human Behavior
Division of Child & Adolescent Psychiatry
833 Chestnut Street, Suite 210
Philadelphia, PA 19107
(215) 503-2824 – phone
(215) 503-2853 – fax
matthew.wintersteen@jefferson.edu

Portions of this presentation were supported by a pilot grant awarded to Dr. Wintersteen by the American Foundation for Suicide Prevention (AFSP). The opinions expressed are those of Dr. Wintersteen and do not reflect official positions of AFSP or the government.