SCREENING FOR YOUTH SUICIDE RISK IN EMERGENCY MEDICAL SETTINGS

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Suicide is 3rd leading cause of death in 13-19 year age group; Male to Female ratio = 4.3:1
(www.cdc.gov/ncipc/wisqars; 06/16/09, data from 1999-2006)

Among adolescents who die by suicide:
- History of suicide attempts common, 34 – 44%
  (Marttunen et al., 1992; Brent et al., 1988)
- Many never obtained any mental health services; 54%
  (Shaffer, D., et al., 1996)
MALE SUICIDE RATES BY AGE AND RACE
FEMALE SUICIDE RATES BY AGE AND RACE

The chart illustrates the crude suicide rates for females across different age groups and races. The age groups range from 5-9 to 85+. Each race category is represented by a different color line on the graph, allowing for comparative analysis of suicide rates among White, American Indian/Alaskan Native, Hispanic, Black, and Asian/Pacific Islander populations.
72% report significant suicidal ideation or acts; 22% had a definite plan or attempted suicide (Myers et al., 1991)

Past suicide attempt and current depressive disorder strongest predictors of future suicide attempt (Lewinsohn et al., 1996)

1/2 adolescent male suicide victims and 2/3 female suicide victims suffered from depressive disorder
ALCOHOL/SUBSTANCE ABUSE IN YOUTH AND SUICIDALITY

- Adolescents with alcohol abuse/dependence nearly 7X more likely to attempt suicide than others (OADP; Andrews & Lewinsohn, 1992)

- Alcohol abuse predicts eventual suicide in 5-yr follow-up of hospitalized attempters (Kotila, 1992)

- Recent alcohol ingestion common in suicide
  - 28% (Hoberman & Garfinkel, 1988)
  - 51% (Marttunen et al., 1991)
THREE CHALLENGES IN YOUTH SUICIDE PREVENTION

- Identifying the youths at risk, especially adolescent males who are most likely to die by suicide
- The co-occurrence and synergistic roles of risk factors such as depression, alcohol misuse, and history of suicide attempt
- The relatively low level of treatment seeking, particularly among older adolescents who are at highest risk for suicide
EMERGENCY DEPARTMENT
SUICIDE RISK SCREENING IN
ADOLESCENTS

WHY THE EMERGENCY DEPARTMENT?

- 30% adolescents use ED each year (Britto et al., 2001)
- Many use ED as primary source of care; This group has higher incidence of depression and alcohol abuse (Wilson & Klein, 2000)
- ED visits in past year: 39% of those who died by suicide (16-93 years) (Gairin, House, & Owens, 2003)
- At risk boys and girls are well represented
Adolescent depression screening
- Adolescents, between the ages of 13-19, completed the BDI-II (Scott et al., 2006)
  - 45% reported mild to severe depressive symptoms
  - 19% reported severe depressive symptoms
- Adolescents, between the ages of 12-17, completed the CESD (Rutman et al., 2008)
  - 37% screened positive for depression on the CESD
  - Two question screen had a sensitivity of 78% and a specificity of 82% when compared to the CESD

Adolescent suicide risk screening (Horowitz et al., 2001)
- Four item measure from Risk of Suicide Questionnaire had a sensitivity of 98% and specificity of 37% when compared to the Suicidal Ideation Questionnaire (SIQ) in adolescents aged 11 to 16 years old.
Examine concurrent validity and utility of suicide risk screen in medical ED

Examine two sets of screen criteria
  - Severe suicide ideation or recent attempt
  - Depression and alcohol abuse
PARTICIPANTS

- Participants
  - 295 adolescents completed screen
  - Sex: 50% female, 50% male
  - Mean Age: 15.0 years (range 13-17; SD=1.39)
  - Race/Ethnicity: 83% Caucasian, 16% African American, 5.4% Hispanic/Latino

- Exclusion Criteria
  - Life-threatening condition
  - Severe cognitive impairment
  - Language barrier
PROCEDURES
ADOLESCENT SUICIDE RISK SCREENING

- Approached consecutively eligible adolescents
- Obtained written consent/assent
- Adolescent privately completed screen; parent interviewed for demographic information
- Informed ED staff of “high risk” adolescents
**Screen Measures**

- Reynolds Depression Scale – 2
- Suicidal Ideation Questionnaire-JR
- Suicide Attempt Question
- AUDIT – 3 item

**Positive Screen Criteria**

SIQ-Jr ≥ 31 AND/OR History of Recent Suicide Attempt
RADS-2 ≥ 76  AND AUDIT-3 ≥ 3
16% Screened Positive (n = 48)

- Sex: 67% female; 33% male
- Mean Age: 15.1 years (range 13-17; SD = 1.33)
- Race/Ethnicity: 83% Caucasian, 13% African American, 4.2% Hispanic/Latino
CHIEF COMPLAINTS FOR ADOLESCENTS WITH POSITIVE SUICIDE RISK SCREENS

Positive Screen (n = 48)

~19% Non-psychiatric Potentially Unidentified

Medical Complaint, n=5, 10.4%

Unintentional Injury, n=3, 6.3%

Intentional Injury by Other, n=1, 2.1%

Psychiatric Complaint (non-suicidal), n=8, 16.7%

Suicidal Ideation, n=24, 50.0%

Suicide Attempt, n=7, 14.6%
REASONS FOR POSITIVE SUICIDE RISK SCREENS

Suicide Attempt in Past 3 Months

Positive for Depression and Alcohol Use

Suicide Ideation

1 4 15

1 7 16

4
VALIDITY

ADOLESCENT SUICIDE RISK SCREENING

- Positive screen due to depression plus alcohol abuse vs. other criterion
  - More negative consequences from alcohol use
  - More impulsivity

- Positive screen for severe suicide ideation/suicide attempt
  - Higher hopelessness than psychiatrically hospitalized adolescents (Steer, Kumar, & Beck, 1993)
19% of positive screen adolescents had non-psychiatric chief complaints
35.4% of positive screen adolescents had chief complaints other than suicide ideation/attempt

Not receiving treatment:
- 33% of positive screens with psychiatric chief complaints
- 50% of positive screens with non-psychiatric chief complaints
FEASIBILITY
ADOLESCENT SUICIDE RISK SCREENING

- Evidence of feasibility in pediatric and psychiatric emergency department settings
  - Computerized patient tracking systems allow for easy identification of eligible youth
  - Waiting times in ED provide screening opportunities
  - Partnership and feedback loop with ED liaisons enabled modifications in procedures

- Yet, we provided the screening staff!
ACCEPTABILITY OF MENTAL HEALTH SCREENING

OBJECTIVES
ACCEPTABILITY OF MENTAL HEALTH SCREENING

- Examine adolescent and parent attitudes about importance and acceptability of suicide risk screening and broader mental health screening for adolescents in Emergency Department

- Explore parent/adolescent, gender, and racial differences in attitudes
Participants
- 299 adolescents, 13-17 years (49% female, 72% Caucasian)
- 305 parents (73% female, 79% Caucasian)
- Exclusion criteria: Level I Trauma, medical severity, cognitive delay, and non-English speaking

High consent rate (89% adolescents, 91% parents) with waiver of written consent

Completed short self-report survey
FINDINGS
ACCEPTABILITY OF MENTAL HEALTH SCREENING

- Most participants (57% adolescents, 70% parents) “strongly” or “very strongly agree” that screening should be part of routine care

- Even more (≥ 87% adolescents, ≥ 96% parents) thought it was “somewhat important” to “extremely important” to screen for mental health concerns
## FINDINGS
### ACCEPTABILITY OF MENTAL HEALTH SCREENING

- Screening for suicide risk rated as more important or equally important to other mental health concerns

<table>
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<tr>
<th></th>
<th>Parents</th>
<th>p-value</th>
<th>Adolescents</th>
<th>p-value</th>
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<tr>
<td>Suicide risk</td>
<td>4.1 (1.1)</td>
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<td>3.9 (1.2)</td>
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<tr>
<td>Depression</td>
<td>3.8 (1.0)</td>
<td>&lt;.001</td>
<td>3.3 (1.1)</td>
<td>&lt;.001</td>
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<td>Anxiety</td>
<td>3.7 (1.1)</td>
<td>&lt;.001</td>
<td>3.1 (1.1)</td>
<td>&lt;.001</td>
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<td>Alcohol misuse</td>
<td>4.0 (1.0)</td>
<td>.09</td>
<td>3.6 (1.2)</td>
<td>&lt;.001</td>
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<tr>
<td>Drug misuse</td>
<td>4.0 (1.0)</td>
<td>.34</td>
<td>3.8 (1.2)</td>
<td>.04</td>
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<tr>
<td>Eating problems</td>
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<td>&lt;.001</td>
<td>3.9 (1.2)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Behavior problems</td>
<td>3.7 (1.0)</td>
<td>&lt;.001</td>
<td>3.4 (1.2)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Dating violence</td>
<td>3.6 (1.1)</td>
<td>&lt;.001</td>
<td>3.0 (1.2)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Findings indicate means are significantly different from the mean score for the importance of screening for suicide risk. Parents and adolescents analyzed separately.
FINDINGS

ACCEPTABILITY OF MENTAL HEALTH SCREENING

- Females rated importance of screening higher than males (parents for all concerns; adolescents, all except alcohol and drug misuse).
- Parents rated importance of screening higher than adolescents (except suicide risk).
- Parents rated concerns about screening lower than adolescents.
- Black participants more likely than Caucasian to agree to take a screening if adolescents offered (adolescents and parents)
SELF-REPORT VALIDITY/BIAS IN ADOLESCENT SUICIDE RISK SCREENING

Suicide risk screens use self-report measures.

What are possible threats to validity of self-reports? Self-report biases?

Research suggests adult males are less likely to report depressive symptoms (Sigmon, 2005), especially when expecting follow up contact (Staton et al., 1991).
Aims

- To understand possible self-report bias in suicide risk screening with adolescents
- To determine if an anticipated in-person follow-up affects self-reported suicide risk
- To determine whether gender and socioeconomic status moderate the effect of anticipated in-person follow-up on self-reported suicide risk
SELF-REPORT SUICIDE RISK SCREENING

- Participants
  - 245 adolescents (131 female, 114 male)
  - Ages 13-17 ($M= 15.32$, $SD= 1.37$)
  - 80% Caucasian, 21.6% African American, 9.8% American Indian/Alaskan Native, 5.7% Hispanic/Latino, 2.9% Asian, 4.1% Other.

- Randomization to two groups
  - In-Person Feedback: Informed that screen responses would be discussed with staff member
  - No In-Person Feedback
Feedback condition had no main effect on screen scores (suicide ideation, depression scores, problem behaviors).

Socioeconomic Status (Public Assistance: Yes/No) interacted with follow-up condition to impact screen scores.
- Suicidal thoughts
- Problem behaviors

Adolescents whose families received public assistance
- less likely to report aggressive-delinquent behavior if assigned to in-person follow-up
- reported significantly lower levels of suicidal ideation if assigned to in-person follow-up
Adolescents from poorer families may hesitate to share distress/problems due to social desirability bias and/or fear of intrusion.

Many adolescents do not respond differently to suicide risk screens when they know that in-person discussion with a staff member will take place.
TEEN OPTIONS FOR CHANGE (TOC)

Suicide Risk Detection and Treatment Facilitation
NIMH-R34 Intervention Development Study
GOALS
TEEN OPTIONS FOR CHANGE (TOC)

- Earlier detection of elevated suicide risk and treatment facilitation
- Improve problem recognition, readiness for change, treatment seeking
- Reduce suicide ideation and behavior, depression, alcohol misuse
INTERVENTION DEVELOPMENT PLAN

1. Explore TOC Concept/Initial Pilot
2. Establish Community Linkages and Obtain Input
3. Develop Services Decision Aid & Intervention Manual
4. Feasibility Pilot
5. Randomized Controlled Trial
6. Report Findings
Screen for elevated suicide risk

Family Adapted Motivational Interview (AMI)
- Adolescent AMI with personalized feedback
- Parent/Adolescent AMI with culturally tailored Services Decision Aid

Follow-up note
ASSESSMENTS

- Suicide Risk Screen
  - Adolescent self-report
  - Parent demographic form

- Baseline Evaluation
  - Adolescent self-report measures
  - Parent interview: history of treatment/services

- Two-Month Follow-up Evaluation
Model of Family Motivational Interview

**Individual MI with Adolescent**
- Provide personalized feedback
- Explore ambivalence
- Build discrepancy (behavior/value)

**Conjoint MI with Parent/Adolescent**
- Share adolescent feedback
- Explore Services/Treatment Options
- Discuss perceived barriers

- Enhance problem importance
- Increase readiness to change

- Enhance problem importance
- Facilitate goal setting

- Increase perceived need for treatment

- Increase confidence in treatment seeking

**Treatment Seeking**
THEORETICAL MODEL

- Motivational Interviewing Theory
- Theory of Health Behavior
- Adapted Motivational Interviewing (Adolescent, Parent/Adolescent)
- Theory of Planned Behavior
- Self Determination Theory
Positive vs. Negative Screen for suicide risk

- Negative Screen, n=340, 83%
- Positive Screen, n=69, 17%

Criteria for Positive Screens

- Suicide Attempt or Ideation 34%
- Alcohol/Substance Misuse and Depression 45%
- Both Criteria Met 21%
PERSONALIZED FEEDBACK

- Details scores on screening measures
- Provides normative data for comparisons to other adolescents of same gender
- Identifies problem areas (i.e. social withdrawal or binge drinking)
### Why do I want to change?

#### COMMON GOALS FOR TEENS:
- Friendship
- Popularity
- Being strong
- Being responsible
- Belonging/Fitting in
- Being in control
- Being athletic
- Graduating high school
- Going to college
- Getting a job
- Getting a car
- Making family proud
- Making sure my kids have a better life than me
- Having a boyfriend/girlfriend

#### COMMON VALUES FOR TEENS:
- Success & Happiness
- Spirituality
- Honesty
- Respect
- Independence
- Freedom
- Confidence
- Being healthy and fit
- Fame
- Being a good student
- Getting along with others
- Maturity
- Money
- Loyalty
- Pride

### Am I ready to change?

#### READINESS RULER

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<td>Not Ready</td>
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<tr>
<td>Ready</td>
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</tbody>
</table>
OUR ACTION STEPS

Objective:

Steps to Take:

Step 1)
What?  
Who?  When?

Step 2)
What?  
Who?  When?

Step 3)
What?  
Who?  When?

Readiness for change
1  2  3  4  5  6  7  8  9  10
Not Ready  Unsure  Ready

_________ will call me between: ___________

Teen Options for CHANGE
## TOC RECRUITMENT

<table>
<thead>
<tr>
<th>Study Consent Information</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Total in Age Range:</td>
<td>828</td>
</tr>
<tr>
<td>Total Eligible</td>
<td>660</td>
</tr>
<tr>
<td>(Meet inclusion/exclusion criteria):</td>
<td></td>
</tr>
<tr>
<td>Total Consented and Screened:</td>
<td>527</td>
</tr>
<tr>
<td>Total Refused:</td>
<td>107</td>
</tr>
<tr>
<td>Total Missed:</td>
<td>26</td>
</tr>
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</table>
# Demographic Characteristics of Screened Adolescents (N = 527)

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Description</th>
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<tbody>
<tr>
<td>Sex</td>
<td>65% Female; 35% Male</td>
</tr>
<tr>
<td>Age</td>
<td>$M: 17.3 \text{ years (SD = 1.7)}$</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>33%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>51%</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>13%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Clinical Variables</td>
<td>Percent</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Suicidal Ideation in past 2 weeks</td>
<td>7.6%</td>
</tr>
<tr>
<td>Suicide Attempt in past month</td>
<td>2.3%</td>
</tr>
<tr>
<td>Above AUDIT (Alcohol Use) Cutoff</td>
<td>14%</td>
</tr>
<tr>
<td>Above CRAFFT (Drug Use) Cutoff</td>
<td>28%</td>
</tr>
<tr>
<td>Above RADS-2:SF (Depression) Cutoff</td>
<td>21%</td>
</tr>
<tr>
<td>Psychosocial Variables</td>
<td></td>
</tr>
<tr>
<td>Unwed Pregnancy (Both M &amp; F)</td>
<td>23%</td>
</tr>
<tr>
<td>Death of Parent</td>
<td>11%</td>
</tr>
<tr>
<td>Jail Sentence of Parent</td>
<td>22%</td>
</tr>
<tr>
<td>Death of Close Friend</td>
<td>52%</td>
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### TOC PILOT RCT FINDINGS

<table>
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<th>Control n= 22</th>
<th></th>
<th>TOC n = 24</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Baseline M (SD)</td>
<td>2M Follow-up M (SD)</td>
<td>Baseline M (SD)</td>
<td>2M Follow-up M (SD)</td>
</tr>
<tr>
<td>Depression (RADS-2:SF)</td>
<td>28.32 (3.4)</td>
<td>30.87 (4.0)</td>
<td>27.25 (4.2)</td>
<td>25.38 (4.7)</td>
</tr>
<tr>
<td>Hopelessness (BHS)</td>
<td>8.79 (5.7)</td>
<td>8.64 (5.7)</td>
<td>7.94 (4.6)</td>
<td>5.66 (5.2)</td>
</tr>
<tr>
<td>Suicidal Ideation (SIQ-JR)</td>
<td>29.40 (24.6)</td>
<td>24.28 (17.3)</td>
<td>31.02 (19.6)</td>
<td>21.46 (17.4)</td>
</tr>
<tr>
<td>Alcohol Use (AUDIT)</td>
<td>5.05 (7.5)</td>
<td>5.95 (7.7)</td>
<td>5.17 (6.3)</td>
<td>4.71 (3.9)</td>
</tr>
</tbody>
</table>

Repeated measures analyses of variance (intent to treat) were used. For the RADS-2:SF, there was a significant main effect for treatment, \( F(1,44) = 10.84, p < .01 \), and a significant time X treatment interaction, \( F(1,44) = 9.89, p < .01 \). Adolescents randomly assigned to TOC showed greater improvements in self-reported depression severity.
SELF REPORT INSTRUMENTS AS PREDICTORS OF SUICIDAL THOUGHTS AND BEHAVIOR

Suicidal Ideation Questionnaire - Junior

- Self-report; 15-item, 7-point frequency scale (SIQ-JR; Reynolds, 1988)

- Excellent psychometric properties

- Evidence of predictive validity
  - suicide attempts in American Indian adolescents (Keane et al., 1996)
  - post-hospitalization suicide attempts in adolescents (King et al., 1995)
Beck Hopelessness Scale (BHS)

- Self-report, 20-item true/false scale (Beck et al., 1974; Beck & Steer, 1988)
- Evidence of predictive validity
  - Higher scores associated with treatment drop-out in adolescents (Brent et al., 1997)
  - Higher scores predict suicide attempts (among adolescents with prior history of attempt; Goldston et al., 2000)
Study Aim: Examine convergent and predictive validity of commonly used measures:
- Beck Hopelessness Scale (BHS)
- Suicidal Ideation Questionnaire-JR (SIQ-JR)
- Reynolds Adolescent Depression Scale (RADS)
- Suicide Probability Scale (SPS)

Participants: 289 psychiatrically hospitalized suicidal adolescents, ages 12-17 years (54% suicide attempts)

Design: Short-term longitudinal – 6 months
Results

- All measures positively correlated at baseline ($r = 0.56–0.83$)
- 14% ($n = 32$) suicide attempt during follow-up
- Higher scores on all measures increased probability suicide attempt (controlled for gender)
- Neither BHS nor RADS improved prediction beyond SIQ-JR or SPS
- Sensitivity/Specificity of Published Cut points

<table>
<thead>
<tr>
<th>Measure</th>
<th>Score</th>
<th>Sensitivity %</th>
<th>Specificity %</th>
</tr>
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<tbody>
<tr>
<td>SIQ-JR</td>
<td>31</td>
<td>77</td>
<td>41</td>
</tr>
<tr>
<td>SPS</td>
<td>78</td>
<td>80</td>
<td>57</td>
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</table>
12-MONTH PREDICTIVE VALIDITY OF SUICIDAL IDEATION FOR SUICIDE ATTEMPTS

Sample: 354 psychiatrically hospitalized, suicidal adolescents, 13-17 years

Method:
- Examine predictive validity of total score for boys and girls across 12 months
- Zero-inflated negative binomial model

PROBABILITY > 1 SUICIDE ATTEMPT AS FUNCTION OF SIQ-JR SCORE, GENDER, MULTIPLE ATTEMPT HISTORY
Total scores ONLY had predictive validity for girls

Consistent with findings from large-scale community-based prospective study (Lewinsohn et al., 2001)

Not idiosyncratic to instrument – these clinical sample and community sample studies used different instruments

Challenge as male adolescents much higher suicide rate
Columbia Suicide Severity Rating Scale (C-SSRS)

- Interview format (Posner et al., 2005, 2011)
  - Assesses suicidal ideation along a spectrum: “wish to be dead” to “suicide intent with a specific plan”
  - Details actual, interrupted, aborted attempts, preparatory acts, and self-injurious behavior
- Assesses for previous week and lifetime (or since last interview)
C-SSRS: Interview format (Posner et al., 2005, 2011)

- Assesses suicidal ideation along a spectrum: “wish to be dead” to “suicide intent with a specific plan”

- Details actual, interrupted, aborted attempts, preparatory acts, and self-injurious behavior

- Assesses for previous week and lifetime (or since last interview)

- Increasingly being used!
STUDY AIMS

- Examine C-SSRS past week Suicidal Ideation variables as predictors of suicide attempts (with/without aborted and interrupted attempts)
  - Severity of Ideation (5-point ordinal scale from “wish to be dead” to “suicidal intent with plan”)
  - Intensity of Ideation (frequency, duration, controllability, deterrents, reason for ideation)

- Examine C-SSRS Suicidal Behavior and Non-Suicidal Self Injurious Behavior as predictors of suicide attempts.
PARTICIPANT DEMOGRAPHICS ($N = 186$)

- **Ages:** 13-17 years ($M = 15.24, \ SD = 1.35$)
- **Gender:** 44.6% Male, 54.8% Female
- **Race/Ethnicity**
  - Caucasian: 131
  - African American: 40
  - Asian: 4
  - Hispanic: 6
  - Other: 9
- **Insurance**
  - Medicaid/None: 34.9%
  - Private: 64.5%
  - Missing: 0.5%

*5 participants endorsed two Race/Ethnicities*
BASELINE CLINICAL CHARACTERISTICS

- **Reason for visit***
  - Suicidal Ideation/Attempt: 93
  - Aggression: 39
  - Other: 65

- **Past psychiatric history (yes/no): 78.0%**

- **Number of past psychiatric emergency visits**
  - 0 = 59.1%
  - 1 = 24.7%
  - ≥ 2 = 15.2%

- **Current psychotropics medications**
  - None = 76
  - Anti-depressants = 62
  - Mood Stabilizers = 26
  - Anti-psychotics = 53
  - Stimulants = 42
  - Benzodiazepines = 15

* 11 adolescents with two recorded reasons for visit and 1 adolescent with three.
BASELINE CLINICAL CHARACTERISTICS

- **Diagnosis in ED**
  - Mood/anxiety: 155
  - ADHD: 39
  - Psychosis: 16
  - Autism Spectrum: 6
  - Eating Disorder: 5
  - Other: 52

- **Disposition**
  - Hospitalization: 37.1%
  - Return to Outpatient Provider: 30.6%
  - New Provider: 26.9%
  - Partial Program: 3.2%
  - Missing/Other: 3.7%
History of Suicidal Behavior

- Actual Attempt
  - Lifetime: 30.6%
  - Past Week: 12.9%
- Aborted Attempt
  - Lifetime: 8.6%
  - Past Week: 5.9%
- Interrupted Attempt
  - Lifetime: 7.0%
  - Past Week: 7.0%
RESULTS FOR PREDICTIVE VALIDITY

- **Results**
  - Predictors of return PE visits (OR; 95% CI)
    - # of past PE visits- (1.66; 1.21-2.28)
    - C-SSRS Intensity Scale item: Duration- (1.92; 1.12-3.28)
  - Predictors of suicide attempts at follow-up
    - # of past PE visits- (1.73; 1.06-2.84)
    - C-SSRS Intensity Scale- (1.09; 1.01-1.17)
    - C-SSRS Intensity Scale item: Duration- (3.26; 1.20-8.85)
ATTENTION MEDIATED HOPELESSNESS MODEL OF SUICIDAL IDEATION
SMITH, ALLEY, & ABRAMSON (2006)

- **Negative Cognitive Style**
  - Dysfunctional attitudes, depressogenic thinking, negative inferences

- **Rumination**
  - “repetitive contemplation of one’s negative affect” – MULLING OVER THE CAUSES, CONSEQUENCES, AND SYMPTOMS OF DEPRESSED MOOD

- **Leads to hopelessness, which predicts suicidal thinking**
ADOLESCENT AND YOUNG ADULT PSYCHIATRIC EMERGENCY PATIENTS: The C-SSRS as a Predictor of Suicide Attempts for Males and Females

GENDER DIFFERENCES

- “Gender Paradox” - Canetto & Sakinofsky, 1998
  - Females more likely to think about and attempt suicide, males more likely to die by suicide.
- Females are appx. 2-3x more likely to endorse suicidal thoughts and past attempts of suicide.
- Males in USA (ages 15-24) were nearly 6x more likely to die by suicide from 1999-2007 (CDC).
- Internalizing vs. Externalizing
- Males more likely than females to be intoxicated at time of attempt, use more lethal means of attempting suicide (Marttunen et al., 1991)
Suicide screens are very good at capturing individuals at high risk, but also have many false positives.
- Need to improve ways to identify and intervene

Certain aspects within known risk factors (e.g., severity/intensity of suicidal thoughts) not yet fully examined

Still unclear how certain risk factors might vary in predictive ability based on gender
- Recent study (King et al., manuscript under review) indicates gender moderates relationship between suicidal ideation future suicide attempts.
  - Females: Suicidal ideation scores predict future attempts
  - Males: Suicidal ideation scores do NOT predict future attempts
Participants
- 473 patients, ages 15-24, Washtenaw county residents, presenting from Oct ‘09 – Jun ’10
  - Followed for 18 months

Measures
- C-SSRS administered by PES staff (clinical protocol)
- Chart review coded from doctor and nurse/SW notes

Coding/Reliability
- Double coded portion of doctors notes, alpha = .XX
## RESULTS
### SAMPLE DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>473</td>
</tr>
<tr>
<td>Sex</td>
<td>53% Female; 47% Male</td>
</tr>
<tr>
<td>Age</td>
<td>$M: 19.4$ years (SD = 2.9)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>69%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>17%</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>5%</td>
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<tr>
<td>Hispanic</td>
<td>2%</td>
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<tr>
<td>Multiracial</td>
<td>7%</td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>63%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>27%</td>
</tr>
<tr>
<td>None</td>
<td>11%</td>
</tr>
</tbody>
</table>
RESULTS

BASELINE CLINICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>Males (n = 222)</th>
<th>Females (n = 251)</th>
<th>$\chi^2$ p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime NSSI</td>
<td>33.6%</td>
<td>57.2%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Past week attempt</td>
<td>7.6%</td>
<td>7.8%</td>
<td>.924</td>
</tr>
<tr>
<td>Lifetime attempt</td>
<td>25.2%</td>
<td>33.9%</td>
<td>.040</td>
</tr>
<tr>
<td>Multiple past attempts</td>
<td>11.7%</td>
<td>18.7%</td>
<td>.035</td>
</tr>
<tr>
<td>Current suicidal ideation</td>
<td>42.4%</td>
<td>52.8%</td>
<td>.028</td>
</tr>
<tr>
<td>Current suicide intent</td>
<td>21.4%</td>
<td>26.0%</td>
<td>.263</td>
</tr>
</tbody>
</table>
RESULTS
SUMMARY

- Lifetime attempt and suicidal ideation severity/intensity predict future suicide attempts for both males and females.
- Non-suicidal self-injury was a significant predictor of a future attempt, but not when past attempt and current ideation were also controlled for.
- Among those with some suicidal ideation, the duration of thoughts was predictive for male future suicide attempts (3x per point), but not females.
Thank you

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