Depressed and Suicidal Youth: Recent trends and treatment strategies

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Program Director, Suicide Prevention and Resilience Program at Children’s (SPARC)
Objectives

- Understanding the scope of suicidality in youth
- Current treatments
- Development of an IOP
- Research efforts at UT/Children’s
Suicide: The Numbers

- Suicide, the second leading cause of death in youths ages 10-24
- 24% increase in the age-adjusted suicide rate in the United States between 1999 through 2014
- Suicide counts for more deaths than any major single medical illness
- No appreciable decrease in U.S. suicide rates over the past 60 years (National Action Alliance for Suicide Prevention Research, 2014)

Ideation, Plan, Attempts in High Schoolers

- 17% seriously considered attempting suicide
- 13.6% have ideation with plan
- 8% report making a suicide attempt within the prior year
- 2.7% Suicide attempt requiring medical treatment

Kann, et al, YRBSS 2013, 2014, Centers for Disease Control and Prevention
2008 to 2015: Youth seen in Children’s Hospitals Doubles

- Annual percentage of encounters identified as suicidality or self-harm more than doubled over the study period
  - increasing from 0.67 percent in 2008 to 1.79 percent in 2015.
- Significant increases in visits were noted in all age groups but were higher among older children

Risk factors for Suicidality

- Current or lifetime psychopathology (mood disorders most common)
- History of previous attempts or self-injurious behavior
- Hopelessness
- Impulsivity
- Lack of affect regulation
- Poor problem-solving skills
- Social skills deficits
- Hostility and aggression
- Drug or alcohol abuse
- High situational stress
- Insomnia
- Parental psychiatric conditions
- Family discord, neglect, or abuse
- Availability of lethal agents
  - Brent et al. (2000) found that suicide completion risk is increased if family has a handgun in the home
- Suicide contagion
Protective Factors

- Positive relationship with family
- Positive connection between child and school; adult and work
- Academic or work success

- Pro social peer group
- Religious affiliation
- Fair number of reasons for living
- Future goals
- Treatment adherence
Risk for suicidal behavior post discharge from the hospital is particularly high (Chung, et al, 2017)

The majority of hospitalized adolescents who attempt suicide receive limited follow-up care (approximately 4 outpatient visits) with less than 40% receiving more than one visit (Bridge et al, 2012; Spirito, et al 2002).

Interventions for suicidal adolescents that include distress tolerance, emotion regulation, and safety planning have promising results (Asarnow et al.,2017; Diamond et al., 2010; Melhum et al., 2014; Stanley et al., 2009; Ougrin et al 2014; Brent et al., 2013).
Need Treatments that work

▶ 55% of youths began treatment prior to suicidal behavior (and treatment failed to prevent behavior; Nock et al., 2013)
▶ Recent review of suicide/self-harm treatments (Brent et al., 2013)
  ▶ Successful treatments:
    ▶ Focused on family interactions or non-familial support
    ▶ Included more sessions
    ▶ Focused on motivation for treatment and coordination with other services
Need Treatments that work

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  - Successful treatments:
    - Focused on family interactions or non-familial support
    - Included more sessions
    - Focused on motivation for treatment and coordination with other services
  - Recommendations:
    - “Front-load” treatment sessions
    - Focus on protective factors (e.g., family, sources of support, positive affect)
    - Focus on important risk factors (e.g., promote healthy sleep, address substance risk)
Cognitive Behavior Therapy for Suicide Prevent (CBT-SP)

- Main focus: reduction of suicidal risk
  - Can be added to ongoing treatment
  - Goal: help patients use more effective ways of coping with stressors that precipitate suicidal crises

- Coping through training in cognitive, behavioral, and interactional skills
Heritage of CBT-SP

- CBT for suicide attempters (Brown, Beck)
- DBT (Linehan, Miller, Stanley)
- TADS (Curry, Wells, Clarke, Kennard)
- TORDIA (Brent)
Treatment of Adolescent Suicide Attempters (TASA) Study

- A multi-site NIMH-sponsored study of depressed suicidal adolescents
- Ages 12-18, with depression (MDD, Dysthymia, or Depression-NOS) and a suicide attempt within past 90 days
- Treatment: medication alone vs. CBT alone vs. medication and CBT (randomization vs. choice)
- A feasibility study
Pilot Study of TASA

- N=124 depressed adolescent suicide attempters
- Mostly open trial, 110 received CBT-SP
- Mostly female, age 16, Caucasian
- Depressed, 2.3 attempts
Time to Onset of Suicidal Events and Attempts in TASA*

*Brent et al., 2009
Mean SSI by suicidal event group

Scale of Suicidal Ideation

Day

- no suicidal event
- suicidal event
## Predictors of Onset/Time to Onset of Suicidal Events (OR’s)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Occurrence</th>
<th>Time to Event</th>
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<tbody>
<tr>
<td>Income</td>
<td>2.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Caucasian race</td>
<td>-----</td>
<td>2.6</td>
</tr>
<tr>
<td>Site</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Family cohesion</td>
<td>-----</td>
<td>0.94</td>
</tr>
<tr>
<td>No. previous attempts</td>
<td>-----</td>
<td>1.5</td>
</tr>
<tr>
<td>Lethality</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>18.2</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Conclusions

- CBT-SP feasible, well-accepted
- 40% of events occurring within first 4 weeks—may need more intense intervention then
- Importance of improving suicidal ideation and functioning early
- Role of trauma
General Principles of CBT-SP

- Primary treatment target: reducing suicidal risk
  - Not a diagnostic-specific treatment
  - For example, depression is the focus of the treatment to the extent that the depression drives the suicide attempt

- Prioritizing treatment (similar to DBT)
  - Life-interfering behaviors
  - Therapy-interfering behaviors
  - Quality of life issues
Safety Plan

- Plan to help patients stay safe until next treatment session
- Hierarchically arranged, prioritized, and specific set of written coping strategies and sources of support
  - Coping and commitment thoughts
  - Internal strategies (distraction, soothing, physiological)
  - External strategies (distraction vs. talk about urges)
  - Clinical contact information
- Shared with parents/caregivers to address any obstacles and to identify opportunities for support
# Patient Safety Plan Template

**Step 1:** Warning signs (thoughts, images, mood, situation, behavior) that a crisis may be developing:

1. 
2. 
3. 

**Step 2:** Internal coping strategies - Things I can do to take my mind off my problems without contacting another person (relaxation technique, physical activity):

1. 
2. 
3. 

**Step 3:** People and social settings that provide distraction:

1. Name ______________________ Phone ______________________
2. Name ______________________ Phone ______________________
3. Place ______________________ 4. Place ______________________

**Step 4:** People whom I can ask for help:

1. Name ______________________ Phone ______________________
2. Name ______________________ Phone ______________________
3. Name ______________________ Phone ______________________

**Step 5:** Professionals or agencies I can contact during a crisis:

1. Clinician Name ______________________ Phone ______________________
   Clinician Pager or Emergency Contact #: ______________________
2. Clinician Name ______________________ Phone ______________________
   Clinician Pager or Emergency Contact #: ______________________
3. Local Urgent Care Services ______________________
   Urgent Care Services Address ______________________
   Urgent Care Services Phone ______________________
4. Suicide Prevention Lifeline Phone: 1-800-273-TALK (8255)

**Step 6:** Making the environment safe:

1. 
2. 

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The one thing that is most important to me and worth living for is: ______________________
Safety Plan: Components

- Setting the Stage:
  - Making the environment safe
  - Identify warning signs

- Step 1: “On My Own” Coping

- Step 2: “With a Friend” Coping

- Step 3: “Tell Someone” Coping

- Clinical contact information
LOCK UP ALL MEDICATIONS
- Over-the-counter and prescription medications, as well as vitamins
- Dispose of medications you no longer need, and keep track of quantities of medication

SECURE FIREARMS
- Outside of the home, secured in a gun safe
- If this is not possible, lock unloaded firearms securely and separately from ammunition

LOCK UP ALL SHARPS AND OTHER POTENTIALLY DANGEROUS ITEMS
- Sharps include knives, scissors, razors, pencil/eye-liner sharpeners, removable corners of picture frames, safety pins, screws, nails, and needles
- Car keys, ropes, ties, scarves, belts, extension cords, household cleaners, and bleach
- Consider items in the home and in the garage
- Do not allow access to alcohol or drugs within the home
Lethal means restriction

- **WORK WITH YOUR CHILD/FAMILY MEMBER TO ADDRESS SAFETY AND THEIR BELONGINGS**
  - room, favorite rooms in the home, school locker and desk
  - Backpack/purse, desks/drawers, closets, corners of carpet, hollow curtain rods, inside pillow cases and zippered pillows, pants and jacket pockets, and soles of shoes

- **TAKE THE SAME PRECAUTIONS IN THE HOMES OF FRIENDS AND FAMILY, AS NEEDED**

- **RESOURCES**
  - [https://www.hsph.harvard.edu/means-matter/](https://www.hsph.harvard.edu/means-matter/)
  - [http://www.yspp.org/about_suicide/means_restriction.htm](http://www.yspp.org/about_suicide/means_restriction.htm)
  - Common places to purchase lock boxes include Amazon.com, Walmart, Home Depot, Target, Sears, Staples, and Lockmed.com.
Availability of Means: Firearms

- Firearms used by 66.4% male suicide victims; 48.3% female suicide victims (McIntosh, 2000)

- Availability of firearms in home differentiates adolescent suicide victims (74.1%) from hospitalized suicidal adolescents (33.9%) (Brent et al., 1998)
Chain Analysis

- Reconstruct events, thoughts, feelings leading up to the suicide attempt
- Freeze frame (Wexler, 1991)
- Identifies precipitants, motivation, intent, current reaction, reaction of environment
- Identified stressors and vulnerabilities, in order to develop a case conceptualization
Chain Analysis: Example with Skills

“I wish they would leave me alone; I’m fine.”

Cognitive restructuring, Problem solving

“I’m sick of this!”

Try to be independent; don’t like people feeling sorry for me

Drop in grades and teacher’s asking “what’s wrong”

Argue with mom

irritable

angry

Family therapy, High Expressed Emotion

Asking for Support

Family therapy, High Expressed Emotion
Thought about summer and molestation

Sad, crying

Thought about wanting to die

“Too much!”

Cut self with razor

Reasons for Living

Self talk; Affect Regulation

Affect Regulation

Cognitive restructuring, Talking back to thoughts

Expressed Emotion
Tips for chain analysis

- Ask questions of what, where, when, how, who—don’t ask why!

- Start with target behavior and go backwards in time

- Use routine times throughout the day to anchor event (ie. Dinner time, TV shows, school time, etc.)

- Trying to assess if issue was a problem in orientation to treatment, commitment, skill deficit, or aspect of classical/operant conditioning

- Highlight/reinforce any skillful behavior
Identify treatment targets

- Manage Crisis first
  - Truce at home?
  - School plan or Work plan

Vulnerabilities: What was different that day? Why that day and not another day?
- Sleep
- Alcohol, substance use

Protective Factors:
- Reasons for living
- Support
- Skills Deficits
Reasons for Living and Hope

► How hopeful are you that this treatment can help you? What would increase/decrease it?
► What things would make you less/more likely to attempt suicide?
► Do you have things worth looking forward to and staying alive for?
REASONS FOR LIVING

- Travel (upcoming vacations, previous vacations, sightseeing, taking a cruise, visiting family and friends)
- Going to the movies
- Competitive sports (baseball, basketball, volleyball, field hockey, tennis, golf, martial arts)
- Outdoor sports (fishing, hunting, hiking, camping, horseback riding)
- Enjoying music (listening to music, thinking about a favorite performer or musical group, playing an instrument, composing songs, writing lyrics, singing, going to concerts, dancing)
- Personal care (sunbathing, massage, taking a bath/shower, manicure)
- Beautiful scenery
- Crafts (woodworking, sewing, knitting, making things)
- Learning martial arts (Karate, Judo)
- Being artistic (drawing, painting, sculpting, art appreciation, going to museums, etc)
- Cars
- Boats
- Exercise and/or being physically fit (walking, running, jogging, lifting weights, losing weight, gaining weight)
- Good conversations (talking on the phone, instant messaging)
- Basic pleasures (eating, sleeping)
- Family Relationships (brothers, sisters, parents)
- Religion (practicing religion, praying, having faith, being moral, attending religious services)
- Family stuff (spending time with family, getting married someday, being a parent someday)
- Other hobbies (cooking, watching TV, shopping)
- Writing (books, poetry, newspaper, articles, making journal entries, keeping a personal diary)
- Driving, working on cars
- Buying gifts for people
- Having a pet
- Career Goals (becoming an actor/actress, veterinarian, doctor, lawyer, stand-up comic etc.)
- Reading (books, magazines, poetry, newspapers, comic books)
- Playing games (video games, board games, cards, solving puzzles)
- Internet (surfing the web, creating your own website, using chat rooms)
- School (getting homework done, getting straight A's, just passing a course, being top of the class, making friends, not being bullied, a favorite course, joining a club, after-school activities)

REASONS I WANT TO ADD:

- Going to college.
Hope Kit

- Specific (tangible) reasons for living
  - Pictures of loved ones
  - Religious reminders (if have moral objection to suicide)
  - Places that give pleasure (beach, mountains)
  - Aspirations (business card in chosen profession)
Individual and/or family skill modules

- Behavioral Activation
- Cognitive Restructuring
- Problem Solving
- Communication and Compromise
- Emotional Regulation and Distress Tolerance
Individual skill modules

- Mobilizing Social Support
- Social Skills:
  - Social Interaction
  - Assertion
- Motivational Interviewing
- Relaxation
Behavioral Activation

- Generating Pleasant Activities
- Guidelines for choosing
  - Safety
  - Resources (money, time, people)
  - Alone and social
  - Activities that can be done easily and FREQUENTLY
- Some patients will need a list
- Consider a log, with mood ratings
Cognitive Restructuring

Immediate, first, quick thoughts that go through your mind in response to a situation. They are your initial thinking reactions that go on to affect emotions and behaviors.

Examples:

- “She thinks I’m weird”
- “I won’t pass that test”
- “My heart might stop beating”
Unhelpful thinking

- Unhelpful thinking styles are ways that we think that are typically automatic and usually not very helpful.
- It may take practice to notice them, but these thoughts can affect our mood and our behaviors in ways that are not helpful.
- Identify times that you cannot change the situation—with your behavior;
- Instead manage the way you think about the situation to effect change in mood
- There is more than one way to look at things!
- Dichotomous thinking can lead to dichotomous decisions!
Problem Solving

- Set of skills
- Identifying a problem
- Generative alternative solutions
- Evaluating those alternatives
- Selecting one approach
- Evaluating how well the solution worked
RIBEYE steps

- Relax
- Identify the Problem
- Brainstorm
- Evaluate
- Yes to one
- Encourage yourself

Activity: Practice with Ribeye worksheet
RIBEYE WORKSHEET

NAME: ______________________  DATE: ______________________

Relax. The method I used to relax and calm my feelings was:

_________________________________________________________

Identify. The specific problem I tried to solve was:

_________________________________________________________

Brainstorm: The possible solutions I thought of were:

_________________________________________________________

Evaluate. The consequences I considered were:

_________________________________________________________

Yes to one. The solution I decided to try was:

_________________________________________________________

Encourage. To encourage myself for making this decision:

_________________________________________________________
Teaching Emotion Regulation Skills

- Skills that lead to long term improvement in therapy
- Are more difficult/intimidating to use

Main Goals include:
- Teach how emotions work
- Importance of self-care in regulating emotions (e.g., sleeping well, eating well, exercising, avoiding drugs and alcohol)
- Mindfulness of emotion
- Opposite action (DBT skill)
Mindfulness of emotion

- Emotions are like waves

- Can teach using feelings thermometer, with focus on:
  - “intensity” of emotion (SUDS, see next slide)
  - Description of feeling (feeling words)
  - Physiological response (body feelings)
  - Thoughts
  - Action urges and behaviors

- Sometimes just noticing the emotion helps you be more regulated

- Can use mood, urge, and thought logs in Teen Workbook
Teaching Distress Tolerance

- Primary skill in beginning of treatment
- Bell curve (time vs. emotion)
- Emotions are like waves, come and go, some big and some small
- Motto: “Don’t make things worse”
- The primary purpose is to often waste time, not feel better (if helps you feel better, that is a bonus!)
Relapse Prevention

- Toward end of acute treatment
- In vivo guided imagery to reconstruct events and induce feelings leading up to the attempt
- Get to re-do the attempt but using new skills
The Relapse Prevention Task consists of five steps:

- Preparation
- Review the Past Attempt
- Review the Past Attempt with Skills
- Review a Future High Risk Scenario
- Debriefing and Follow-up
Addressing patient resistance

- Give strong rationale
- Prepare ahead of time
- Practice imagery ahead of time
- Review any hesitancy
  - Validate
  - Address any cognitive distortions
  - Highlight helpful thought, “This will be a chance to review all of the hard work you have done/skills you have learned!”
- Leave time at end for “closing up”
Family involvement in Relapse Prevention task

- Let family member know ahead of time (particularly with teens, let parent know)
- Give rationale for the task
- Remind of safety plan
- Consider family session where patient shares about experience and shares about effective skills use
Books:
- Treating Depressed and Suicidal Adolescents, 2011, by David Brent, Kim Poling, and Tina Goldstein
- CBT for Depression in Children and Adolescents: A Guide to Relapse Prevention, 2016, by Betsy Kennard, Jennifer Hughes, and Alex Foxwell

Article:
## Estimates of children/adolescents with suicidality at Children’s Health Dallas

<table>
<thead>
<tr>
<th># with Complaint of Suicidality (Consult Service)</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tr>
<td>300</td>
<td>315</td>
<td>557</td>
<td>614</td>
<td>836</td>
<td>956</td>
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</tr>
</tbody>
</table>

***data gathered from CMC consult liaison service (emergency department and medical consults)***
Suicide Prevention and Resilience at Children’s

- To address the high numbers of suicidal youth in the ED, Children’s developed the intensive outpatient program (SPARC)
- Benefits of an IOP program
  - Provides robust services to more children
  - Lower cost
  - Allows the child to remain at home and in school
Program Overview

Program:

- **Youth Group Therapy:**
  - Group therapy 3 hours per day, 2 days per week
  - Evidence-based (CBT with DBT components)
  - Skills to reduce risk factors related to suicidal thoughts and behaviors

- **Parent Group:**
  - 1 hour parent group weekly
  - Focused on skills their child is learning in group

- **Multifamily Group:**
  - 3 hour group therapy, once a week, first two weeks of treatment
  - Focuses on program orientation, skill building, and family communication

- **Therapy**
  - Individual therapy and family therapy provide more individualized care.

Assessments prior to and following treatment

Follow-up assessments at 1 and 6 months post discharge
### How do we compare?

<table>
<thead>
<tr>
<th>Trials/Treatment programs</th>
<th>Attempts after treatment</th>
<th>Completed Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brent, et al 1993</td>
<td>17%</td>
<td>67.3%</td>
</tr>
<tr>
<td>Goldston, et al 1999</td>
<td>20%</td>
<td>83.7%</td>
</tr>
<tr>
<td>National adolescent suicide attempters study (TASA)</td>
<td>12%</td>
<td>72.4%</td>
</tr>
<tr>
<td>SPARC at Children’s</td>
<td>8.0%</td>
<td>82.5%</td>
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</table>
What do we need to address?

- Period post-discharge from hospital is the highest risk for repeat attempts and suicides.
- Often gap between discharge and first outpatient session.
- With outpatient treatment, suicidal events occur early in care, before they have been able to learn much in the way of skills.
- Therefore, doing a brief intervention on the inpatient unit PRIOR to discharge might reduce risk.
ASAP: As Safe as Possible
An intervention for hospitalized, suicidal adolescents

Disclosures

- This project was funded by a 2-site R34 MH100451 & MH100375 (Kennard, Brent)
Elements of TAU and ASAP

**Treatment As Usual**
- Inpatient
  - Standard safety plan
  - Skills groups
- Aftercare (often higher level of care followed by outpatient)

**Added ASAP Components**
- Chain analysis
- Safety Plan
- Internal strategies
  - Interpersonal strategies
  - Clinical contact
- Distress Tolerance
- Emotion Regulation
- MI to encourage outpatient follow-up
Meet BRITE.

- Daily reminders to rate distress
- Rating level of distress in real time:
BRITE

- Routes patient to possible interventions - Savor, Distract, Soothe, Reasons to Live, Reaching out to Contacts—which all can be customized:
BRITE

- Rating the usefulness of the Activity
- Re-Rating of Distress Post Intervention
Suicidal and Treatment Outcomes: 6 months* since intervention

<table>
<thead>
<tr>
<th></th>
<th>TAU</th>
<th>ASAP</th>
<th>P</th>
<th>g</th>
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<tr>
<td>Any suicidality</td>
<td>79.3%</td>
<td>67.7%</td>
<td>0.49</td>
<td>-0.18</td>
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<tr>
<td>Suicidal ideation</td>
<td>75.9%</td>
<td>67.7%</td>
<td>0.49</td>
<td>-0.18</td>
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<td>Suicide related behavior</td>
<td>10.3%</td>
<td>12.9%</td>
<td>&gt;.99</td>
<td>0.08</td>
</tr>
<tr>
<td>Suicide attempt**</td>
<td>28.6%</td>
<td>10.3%</td>
<td>0.08</td>
<td>-0.47</td>
</tr>
<tr>
<td>NSSI</td>
<td>44.8%</td>
<td>45.2%</td>
<td>0.98</td>
<td>0.01</td>
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</table>

*Data Aggregated from Week 4, 12, and 24 Interviews
** This excludes the 3 participants who were still in the hospital at the time of attempt
Time to attempt: TAU vs. ASAP

Hazard Ratio=0.19, 95% CI: 0.04, 0.85, z=-2.18, p=0.03

*adjusted for age
Moderation by History of Past Attempt

TX: HR=0.23, 95% CI: 0.05, 1.09, z=-1.85, p=0.06
Conclusions

1. Both ASAP and BRITE were feasible and acceptable.
2. The rates of suicide attempt in those assigned to ASAP/BRITE were half of those in TAU.
3. There were no main effects for the intervention on suicidal ideation.
4. The intervention appeared to impact social support, which may be related to lower rate of attempts.
5. Participants whose families received at least one ASAP session had a greater decline in suicidal ideation over time.
Next steps

- Replicate ASAP/BRITE in a larger sample
  - Try to isolate active ingredient in a 2 x 2 design
    - (1) ASAP + BRITE + TAU; (2) BRITE + TAU; (3) ASAP + TAU; and (4) TAU alone
  
- Dissemination study training inpatient units to do the intervention.
Thanks!

- To NIMH and our program officers, Jane Pearson and Joel Sherrill
- To the inpatient unit staff who helped us to recruit for this study
- To the patients and families who were willing to participate
- The Department of Psychiatry at UT Southwestern and Children’s Health