Preventing Suicide Attempts & Deaths: Treatment Strategies & Outcomes with Suicidal Youths

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UCLA School of Medicine

Services for Teens at Risk 30th Anniversary Research Symposium
May 3-4, 1917
## Disclosures of Potential Conflicts

<table>
<thead>
<tr>
<th>Source</th>
<th>Research Funding</th>
<th>Advisor/Consultant</th>
<th>Employee</th>
<th>Speakers’ Bureau</th>
<th>Books, Intellectual Property</th>
<th>In-kind Services (example: travel)</th>
<th>Stock or Equity</th>
<th>Honorarium or expenses for this presentation or meeting</th>
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*Duke, Dallas Children’s Hospital, Sick Kids Hospital, Sunny Hills. Consultation limited to practice of psychology, does not involve medications.*
Happy 30th Anniversary!

STAR Program
Thank You!

DAVID BRENT, M.D.
Huntingdon Valley, Pennsylvania
PENNSYLVANIA STATE UNIVERSITY, B.S.
Commons Committee, Theta Kappa Psi
Pediatric Neuropsychiatry Research
Depression Treatment
Quality Improvement

Depression Outcomes: Lower Rates of Severe Depression in QI vs. UC Group

Sponsored by the Agency for Healthcare Research and Quality (AHRQ) R01HS009908
The FDA adopted a "black box" label warning indicating that antidepressants may increase the risk of suicidal thinking and behavior in some children and adolescents with MDD. A black-box warning is the most serious type of warning in prescription drug labeling.
Our Fearless Leader!
Preventing Youth Suicide: Time to Ask How

Glad for what TADS adds, but many TADS grads still sad.

Medicalize depression, not sadness

Choosing life

Antidepressants and suicidal behavior: cause or cure?

Firearms and suicide

Antidepressants and pediatric depression—the risk of doing nothing.

Is the medication bottle for pediatric and adolescent depression half-full or half-empty?

Grave news about adolescents who engage in self-poisoning
Presentation Goals

1. New Results – 2 Studies of Treatment for Suicidal & Self-Harming Youths
2. Up to Date Evidence Review
3. Next steps: New Projects
For Youths Ages 10-14, Suicide Death Rates Doubled from 2007 (0.9) to 2014 (2.1, 425 deaths). Death Rates from Motor Vehicle Traffic Injuries Declined 58% from 1999 to 2014 (1.9, 384 deaths)

https://www.cdc.gov/mmwr/volumes/65/wr/mm6543a8.htm

Differences in death rates for suicide and motor vehicle accidents are not statistically different, p<.05.
Emergency/Acute Care
Family Intervention for Suicide Prevention (FISP)


IMPROVED CONTINUITY OF CARE
National Registry of Evidence Based Practices: http://nrepp.samhsa.gov/
Emergency/Acute Care FISP: Therapeutic Assessment

1. Behavioral Assessment of imminent risk
2. Brief intervention designed to:
   - Improve linkage to outpatient treatment after discharge from the ED/hospital
   - Increase safety
   - Improve family support and protective monitoring
   - Improve youth functioning
FISP-IMPROVED CONTINUITY OF CARE EMERGENCY SETTINGS

National Strategy for Suicide Prevention, Objective 8.4

Care

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<thead>
<tr>
<th></th>
<th>FISP</th>
<th>UC-E</th>
<th>UC-National</th>
<th>ED-Lo</th>
</tr>
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<tbody>
<tr>
<td>Percent</td>
<td>92%</td>
<td>76%</td>
<td>50%</td>
<td>20%</td>
</tr>
</tbody>
</table>

OR 6.2, 95% CI 1.8-21.3, p=.004
## TAU Outpatient Treatment Nonsignificant Effect on Clinical Outcomes

Instrumental Variable Analysis Modeling Linkage to Any Community Outpatient Treatment (TAU) Post-ED/Hospital Discharge and Clinical/Functioning Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Treatment Equation</th>
<th>Outcome Equation</th>
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<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Suicidal Behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0.83</td>
<td>0.33</td>
</tr>
<tr>
<td>FISP</td>
<td>0.33</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>CES-D severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0.88</td>
<td>0.31</td>
</tr>
<tr>
<td>FISP</td>
<td>0.74</td>
<td>0.37</td>
</tr>
<tr>
<td><strong>CBCL Total Problems</strong></td>
<td></td>
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</tbody>
</table>

Asarnow et al, Psychiatric Services, 2011
Cognitive-Behavioral Family Treatment for Suicide Attempt Prevention: A Randomized Controlled Trial

NIMH R34MH078082
American Foundation for Suicide Prevention

J Am Acad Child Adolesc Psychiatry, 2017
Joan R. Asarnow, PhD
Jennifer Hughes, PhD
Kalina N. Babeva, PhD
Catherine Sugar, PhD
SAFETY PROGRAM: A Crisis Intervention Program for Suicide Attempters & Self-Harm

- Time limited, 2-week program
- Designed to
  - be incorporated within emergency mental health programs
  - address need for treatment after a suicide attempt or self-harm
  - to enhance youth safety by building protective processes in youth, family, and community
Treatment is designed to promote SAFETY

- Stress
- Reactions
- Thoughts
- Activities/Actions
- People
- Settings
Structured to Address Special Needs of Population

<table>
<thead>
<tr>
<th>Safety Risk</th>
<th>Primary target increasing safety, reducing suicide/suicide attempt risk</th>
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<tbody>
<tr>
<td></td>
<td>First session in home to assess risk and enhance ability to restrict access to dangerous SA methods</td>
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</table>
Structured to Address Special Needs of Population

<table>
<thead>
<tr>
<th>Improve Treatment Rates, Dose, Quality</th>
<th>Session includes individual youth and parent components, with youth and parent, having therapy time. Goal- strengthen parent and youth motivation to attend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In home sessions when needed to enhance treatment rates</td>
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</table>
SAFETY Treatment Sessions Include Youth, Parent & Family Components

Build a “family” when needed. Parents as “seat belts.”
Structured to Address Needs of Population

Heterogeneity Among Youths & Families

Treatment organized around cognitive-behavioral fit analysis that specifies proximal risk and protective processes leading to youth suicidal behavior and targeted in treatment

Principle guided flexible approach, balances need to address individual youth and family needs with need for specification of intervention model
### OUTCOMES MONITORING & CONTINUOUS QUALITY IMPROVEMENT

SAFETY PROGRAM: Clinical Dashboard for Sample Patient

<table>
<thead>
<tr>
<th></th>
<th>Session Number</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Safety Plan</td>
<td>Y</td>
</tr>
<tr>
<td>Feeling Thermometer</td>
<td>X</td>
</tr>
<tr>
<td>Family Thanks Notes</td>
<td>X</td>
</tr>
<tr>
<td>Safe Setting Check</td>
<td>X</td>
</tr>
<tr>
<td>Self-Monitoring</td>
<td>X</td>
</tr>
<tr>
<td>Hope Box</td>
<td>X</td>
</tr>
<tr>
<td>Safety Pyramid-Eval-Tx Plan</td>
<td>X</td>
</tr>
<tr>
<td>Emotion Regulation</td>
<td>X</td>
</tr>
<tr>
<td>Social Support</td>
<td>X</td>
</tr>
<tr>
<td>Activities</td>
<td>X</td>
</tr>
<tr>
<td>Cognitive</td>
<td>X</td>
</tr>
<tr>
<td>Communication</td>
<td>X</td>
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<tr>
<td>Problem-Solving</td>
<td>X</td>
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Participant Flow Through RCT

Age 11-18 SA or ≥ 3 NSSI Episodes

Ca led (n=140)

Excluded (n=87)
  Ineligible (n=80)
    No SA/NSSI (n=29)
    Psychosis (n=3)
    Other (n=48)
  Refused (n=7)

Ineligible (n=80)
  No SA/NSSI (n=29)
  Psychosis (n=3)
  Other (n=48)
  Refused (n=7)

Consented (n=53)

Excluded (n=4)
  Psychosis (n=1)
  Refused (n=3)

Complete Baseline (n=49)

Excluded (n=7)
  Psychosis (n=3)
  Refused (n=2)
  Training Cases (n=2)

Randomized Intent-To-Treat Sample (n=42)

SAFETY (n=20)

Data Available for Survival Analysis
n=20 (100%) Youth Report
n=20 (100%) Any Report

Enhanced Care (n=22)

Data Available for Survival Analysis
n=12 (55%) Youth Report
n=22 (100%) Any Report*

*N=6 based on early report, within first 30 days.
Higher probability of survival without a suicide attempt for youths randomized to SAFETY vs. Enhanced-TAU: 1.00 vs. 0.67, p<.02, NNT=3 at 3-months; 0.92 vs. 0.67 at 365 days; Wilcoxon $X^2(1)=5.81$, p<.02
Childhood to Adolescence
SAFETY: Parents as Seat Belts
Treatment of Suicidal & Self-Injurious Adolescents with Emotional Dysregulation

- 2 Site Study of DBT vs. Individual and Group Supportive Therapy (Multiple PI)
  - Seattle: Linehan & McCauley
  - Los Angeles: Berk & Asarnow
- Statistician: Robert Gallop

NIMH MH093898
CARES: Study Design

- 12-18 years old
- Suicide Attempt
- Repetitive Self-Harm
- Current suicidal ideation
- Emotionally Dysregulated
  N = 174

Dialectical Behavior Therapy for 6 months (DBT)
  N = 87

Individual and Group Supportive Therapy for 6 months (IGST)
  N = 87

*Outcomes monitored at 3, 6, 9, and 12 months. Randomization considered: age (<16, ≥16); SA history (1, >1); NSSI (0-6, >6); Psychiatric medication (yes, no).
Los Angeles

University of California, Los Angeles

UCLA Medical Center

Harbor-UCLA Medical Center
Seattle

University of Washington, Seattle

Seattle Children’s Hospital
DBT

- Six months of standard DBT
  - Individual therapy
  - Multi-family Skills Group
  - Telephone Coaching (for both teen and parent)
  - Consultation Team

- Adherence measured using the University of Washington DBT Adherence Rating Scale
Biosocial Theory of BPD

Biological Dysfunction in the Emotion Regulation System

Invalidating Environment

Pervasive Emotion Dysregulation

Problem behaviors (e.g. self-harm) function to regulate emotions or are a natural consequence of emotion dysregulation.
The Collaborative Adolescent Research on Emotions and Suicide (CARES) Study
A Randomized Controlled Trial Testing the Effectiveness of Dialectical Behavior Therapy (DBT) with Adolescents at High Risk of Suicide
PIs: Marsha Linehan, Ph.D., Elizabeth McCauley, Ph.D., Michele Berk, Ph.D., Joan Asarnow, Ph.D.

DBT Conceptual Model

DBT for Adolescents
- Individual DBT
- Multifamily Skills Group
- Telephone Coaching
- Consultation Team
- Family DBT Sessions

Increase in Parent Use of DBT Skills
Decrease in Family Conflict

Increase in Adolescent Use of DBT Skills
Improved Emotion Regulation

Decreased Suicide Events
- Suicide
- Suicide Attempt
- Emergency Room Visit/Hospitalization for suicidality

Increased Emotion Regulation
Decreased Suicide Events
CARES Study IGST

• Supportive Therapy: (Adapted from Cohen J et al)
  ➢ Share innermost concerns and feelings
  ➢ Tx--unconditional positive regard and acceptance
  ➢ Group therapy build-- sense of belonging, connection, feeling of being an “insider” with other teens

• Matched with DBT:
  – Individual and group (teens only) weekly sessions
  – Weekly Consultation Team for therapists
  – Parents included when necessary
Outpatient Treatment: Self-Harm Meta-Analysis, Small Significant Effect (p=02)
Ougrin, Tranah, Stahl, Moran, Asarnow, JAACAP, 2015

Searched studies to May 2014
Meta-Analysis: Results
(Ougrin, Tranah, Stahl, Moran, Asarnow, 2015)

- 19 RCTs including 2,176 youths, TIs vs. UC
- Proportion of the adolescents with SH over follow up period was lower in the intervention groups (28%) than in controls (33%), over follow-up period (M = 10 mos, SD 6.8)
- Test for overall effect $Z=2.31$, $p=0.02$
- NNT=14 to prevent 1 SH episode, (95% CI 7.7-100).*
- Effect was nonsignificant for SAs
- Strongest effects for DBT, CBT, MBT
Zero Suicide Initiative
Commitment to suicide prevention in health and behavioral health care systems

Randomized Trial of Stepped Care for Suicide Prevention in Teens & Young Adults
NIMH, MH112147
PIs: Joan Asarnow & Greg Clarke
Primary Study Aims

• To conduct an RCT comparing 2 zero suicide strategies: 1) Stepped Care for Suicide Prevention; and 2) Zero Suicide Quality Improvement (ZSQI)
  – H1: Stepped Care will be associated with lower rates of fatal and nonfatal suicidal behavior, relative to ZSQI

• To evaluate cost-effectiveness
  – H2: Incremental cost per quality adjusted life year (QALY) will be lower for stepped care, compared to ZSQI
Health System Research Partnership

- Joan Asarnow, UCLA
- Greg Clarke, Kaiser Permanente Northwest
- Marsha Linehan, University of Washington, Seattle
Study Features

• Partnership with a health system (KPNW), with strong infrastructure and commitment to quality improvement and the aspirational ZS goal

• Screening and care provided across health system: primary care; behavioral health; emergency services; other medical services

• Stepped care compared to health system zero suicide quality improvement using the zero suicide toolkit (ZSQI, www.sprc.org*)
Study Design

Figure 1. Design of randomized trial.
Stepped Care Model

- Integration with primary care and other medical services
- Treatment model matches assessed need/risk level to intensity of services (care manager + eCBT/DBT video, with stepped up in-person group and/or individual treatment added for higher risk youths)
- Monitoring of patient outcomes (clinical dashboard), with real-time feedback to clinicians to facilitate decision-making and use of the stepped care algorithms
- 12 month treatment period with youths transitioned to usual care health system services following acute treatment
UCLA-Duke Center for Trauma-Informed Adolescent Suicide Self-Harm & Substance Abuse Treatment & Prevention (ASAP)

Mission: To raise the standard of care and improve access to evidence-based services for suicide, self-harm, and substance abuse prevention among traumatized children, their families and communities throughout the United States.

Joan Asarnow, PhD
UCLA

David Goldston, PhD
Duke

SAMHSA, U79 SM080041
# ASAP Center Interventions

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<th>Emergency Acute Care</th>
<th>Emergency Care/Family Intervention for Suicide Prevention (FISP)</th>
<th>Effectiveness:</th>
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<td>1 in-person session, ~3 telephone contacts</td>
<td>2 trials in 3 different Eds</td>
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<td>1 open trial in shelters for runaway youths.</td>
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<td>SA risk decreased when combined with evidence-informed outpatient treatment.</td>
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<th>Post-Acute</th>
<th>SAFETY + DBT Skills</th>
<th>Effectiveness:</th>
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<tr>
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<td>DBT-informed cognitive-behavioral family treatment</td>
<td>SAFETY: 1 open trial, 1 RCT</td>
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<td></td>
<td>12 weeks</td>
<td>DBT Skills: 1 RCT (skills alone)</td>
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<td>SA risk decreased</td>
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The National Child Traumatic Stress Network (NCTSN)

- Established by Congress in 2000 as part of the Children’s Health Act to raise the standard of care and increase access to services for traumatized children, families, and communities

- Funded through SAMHSA and coordinated by the UCLA-Duke University National Center for Child Traumatic Stress

- Grantees include hospitals, universities, and community based programs that are involved in training, service delivery, product development, data collection and evaluation, and public policy and awareness efforts
Thank You