The Intersection of Suicide Research and Public Health Practice: Youth Suicide Prevention

Presenters: Peter Wyman, Ph.D., Jarrod Hindman, M.S.
Moderator: Adam Chu, M.P.H.

Audio will begin at 2:00PM ET
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Meeting Orientation

- If you are having any technical problems joining the webinar please contact the Adobe Connect hotline at **1-800-416-7640**.

- Type any additional questions or comments into the Q&A box.

- You can make the slides larger by clicking on the “Full Screen” button in the upper right hand side of the slide presentation. Click on “Full Screen” again to return to normal view.
Polls
Our Speakers

Peter Wyman, Ph.D.
Jarrod Hindman, M.S.
Moderator:
Adam Chu, M.P.H.
I. Youth Suicide in Perspective

- 34,000 Suicides Per Year in the US
- 4,400 Deaths from ages 10 – 24

Public health importance most apparent when take into account suicidal behavior

- ~1,000,000 million adolescents attempt suicide each year (7.8% on YRBS in 2011)
- Estimated 200 suicide attempts for each death during adolescence (CDC).
- ~2.4% of youth have a serious enough attempt to have medical attention (YRBS 2011)
- Similar levels in young adults, but less extensive surveillance
Youth Suicide Rates by Age (1999-2009)
Youth Suicide Rates 1981-2009

- 10-14 yrs
- 15-19 yrs
- 20-24 yrs
Adolescent Suicides by Region and Rurality

Suicide Rate for 15-19 Year Olds from 1999-2003 by Region and Rurality

Rate Per 100,000

Northeast Midwest South West
Large Central Metro
Large Fringe Metro
Medium Metro
Small Metro
Micropolitan (nonmetro)
NonCore (nonmetro)
Adolescent Suicide Differences

- Rates vary by region/culture/sex/time
  - 2-5 times higher in rural areas (Brown, Wyman 2007)
  - Young Native American males highest rates (CDC)
  - Males account for 84% of suicide deaths in adolescents/young adults
  - Females 2-4 times more likely to attempt suicide
  - Methods: firearms most deaths. Trends vary: in 2000s – increase in strangulation as means of suicide

Context of person/place/time influences suicide:
  - Cultural heritage, local norms, access to means
II. Who is At-Risk for Suicide?

Likelihood of dying by suicide is influenced by many factors, including genetic, biological, psychological and social/cultural influences.

From prevention perspective:

- **High Risk Populations**
  - Defined by ‘individual’ risk factors
  - Focus on services

- **Lower Risk Populations**
  - Focus on changing group, culture
  - May reduce likelihood of low-risk becoming high-risk youth
Which groups are at very high risk?

- Youth with Mental Health, Substance Use Disorders (Shaffer et al., 1993; Gould et al., 2003, Fleischmann et al., 2005)
- 88% of suicides had a diagnosis in autopsy studies
- Other evidence that youth suicide more impulsive and shorter history of mental health problems (Brown et al. 2007)

<table>
<thead>
<tr>
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<th>Increased Risk Ratio</th>
<th>Percent of All Suicides</th>
<th>Potential PoP Reductions</th>
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</thead>
<tbody>
<tr>
<td>Major Depressive Disorder</td>
<td>25</td>
<td>25%</td>
<td>&lt;5-25%</td>
</tr>
<tr>
<td>Substance Abuse/Dependence</td>
<td>7</td>
<td>40%</td>
<td>&lt;8-40%</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>8</td>
<td>20%</td>
<td>&lt;4-20%</td>
</tr>
<tr>
<td>Psychosis</td>
<td>15- ?</td>
<td>5%</td>
<td>&lt;1-5%</td>
</tr>
</tbody>
</table>
Other Individual Risk Factors

- **Adverse Life Events** (Felitti et al., 1998)
  - Sexual assault
  - Abuse/maltreatment history

- **Pathways from Adverse Events to Suicide:**
  - ‘Triggers’ for suicidal crisis
    - Relationship breakups in adolescents/young adults
  - Alter developmental trajectories
  - Evidence that early adversity alters ‘gene expression’ to change long term emotional, cognitive, behavioral phenotypes (Turecki, 2012) — impulsivity, emotional reactivity
Suicidal Behavior in Social Network

- Teens with friends who made attempts at higher risk for suicide attempts (Bearman & Moody 2004)

- Risk of suicide after suicide death in one’s social sphere 2-4 times higher in 15 – 19 year olds than other groups, presumably through ‘acceptability’ of suicide (Gould 1990)

Maladaptive Coping Norms

- Suicidal youth more likely to endorse substance use, suicide as means to address problems; connected to others with similar norms (Gould, 2001; Wyman 2008)

Bullying/Harrassment

- Suicidal ideation and risk for suicide attempts higher among both bullies and victims of bullying (bullies frequently are bullied (Kim 2005; Klomek 2007)

- LGB youth more likely to attempt suicide – linked to harrassment and adverse social environment (Hatzenbuehler, 2011)
Social-Ecological Protective Factors

Positive Peer Relationships
- Being less isolated from peer groups (particularly for girls) and in schools with more dense social ties (particularly for boys) lower risk for suicide attempts (Bearman & Moody 2004)

Caring Relationships with Adults
- Teens with positive connection to their schools and perceived closeness to parents are at lower risk for suicide attempts (Borowsky 2001)
- Associations linking social connectedness with decreased suicidal behaviors found with Latino (Guiao & Esparza, 1995) and American Indian/Alaska Native youth (Borowsky et al., 1999)

‘Connectedness’ enhances psychological well-being, positive emotional states, can promote transmission of adaptive norms and practices, and interpersonal responsiveness (Whitlock, Wyman 2012)

Laws/Policies that Support Means Restriction
- Some evidence that suicide rates higher in regions with fewer restrictions to gun ownership
III. Treatment-Promotion Continuum
Where is Suicide Prevention?
National Academy Sciences 2009
Enhance Treatments to Reduce Suicides

- **Cognitive-Behavior Therapy for Suicide Prevention (CBT-SP)** - Promising (Stanley et al., 2009)

- **Therapies using Dialectical Behavior Therapy** – Promising (Katz et al, 2004)

- **Treatments that include strengthening adolescent-parent attachment relationship**
  - Attachment-Based Family Therapy promising (Diamond et al., 2010)

Important to increase quality of treatment for highest-risk youth.

Will be challenging to show impact on reducing suicide deaths – a challenge of suicide prevention research.
Current Focus of Youth Suicide Prevention: ‘Case-Identification’- Secondary Prevention

**Primary focus:** Identify and refer suicidal or high risk youth for services, addresses; few suicidal youth receiving services

- **Screening school populations** – for depression, substance use, suicidality (Shaffer, 1993)
  - Fairly accurate in identifying high-risk youth
  - Safe to screen (Gould et al., 2005)
  - Logistic challenges – parent consent; miss youth who enter high-risk period

- **Gatekeeper Training** – adult training to recognize/respond to warning signs
  - Increases knowledge of warning signs, attitudes (King, Smith 2000; Wyman et al., 2008)
  - Minimal evidence that more suicidal youth are identified (Wyman et al., 2008)

None of these approaches have shown to reduce suicide in the population
Gatekeeper training of all secondary school staff (2004 – 06) Cobb County (Georgia)

- Multilevel QPR Gatekeeper Training
- 32 schools; 52,000 students per year; randomized

Training increased knowledge, attitudes of staff

* Detecting suicidal student required adults actively engaged with distressed students

* Suicidal students 1/2 as likely to engage adults for help or believe their peers would support help-seeking


* No effects of QPR on increasing detection of suicidal students in high schools; may have modest effect in high schools
Even in the most Optimistic Case, Strategies Limited to High Risk Alone Unlikely to Produce Dramatic Reductions in Suicide Rates

Treatment Won’t Address Needs Of Many Youth:

- Mental health services not accessible or acceptable for many adolescents (particularly rural, tribal)
- Limited ability to identify which at-risk individuals will die by suicide
- A portion (unknown) of suicide attempts/deaths are due to impulsive response to crises and problems not readily identifiable beforehand
- In history of public health, few problems solved by focusing solely on the end-point disorder

• Important to address high-risk youth, but not the only strategy that is needed
Skills and Hybrid Programs: Selective to Universal

Signs of Suicide (SOS)

- Self-screening; depression is treatable; Getting help for self/others
- Two evaluations – classrooms (health classes) assigned to SOS or wait-list for later curriculum (post-only assessments)
  - After 3 months – reduce self-reported suicide attempts in SOS group
  - Not due to self-reported increased help-seeking

Other Programs

- Zuni American Indian Life Skills – Coping skills tailored to culture/heritage; Decreased hopelessness (Laframboise et al., 2008)
- Reconnecting Youth – youth at risk for school drop out; increased school performance, decreased drug involvement (Eggert 1995) – not replicated
- Sources of Strength – trained peer leaders increased school-wide (universal) help-seeking norms (LoMurray, 2005; Wyman 2010)
Can Suicide Prevention Paradigm be Expanded to Include ‘Upstream’ Approaches?

Suicide Rate by Age (1999-2009)

Can a suicide that occurs here... Be prevented here?

Age

Can a suicide that occurs here... Be prevented here?

Can Suicide Prevention Paradigm be Expanded to Include ‘Upstream’ Approaches?
Evidence that Strengthening Early-Life Self-Regulation Reduces Suicidal Behavior: *Good Behavior Game*

- **Good Behavior Game (GBG)** implemented in 1st-2nd grade classrooms in urban, low income schools (Baltimore) – training classroom teachers to promote positive classroom behaviors through peer group reinforcement (Kellam et al., 2008)
- Follow-up of GBG classrooms vs. controls at ages 19 – 21:
  - Reduced by one-half rates of suicidal ideation and attempts occurring by ages 19-21 based on self-reports (Wilcox et al., 2008)
  - GBG reduced substance use, antisocial behavior, high-risk sex behaviors (Kellam et al., 2008),
  - Greatest impact of GBG on behavior for children with highest aggressive-disruptive behavior in grade 1
  - In a second cohort – with less rigorous implementation, Impact of GBG was non-significant but directionally similar in reducing suicidal behavior. Evaluations of GBG in other settings support promise of the approach (van Lier et al., 2005)
- Seminal finding of GBG show potential for reducing suicidal behaviors through ‘upstream’ interventions to prevent cascading risk factors
Prevention Programs in Childhood May Reduce Suicide Rates Across the Life-Span

- **Childhood is key ‘prevention window’ period** (Nat Acad Science; O’Connell et al., 2009):
  - ~50% of mental health disorders have onset by age 14
  - Median age of first diagnosis of depression is 15 years
  - Early adolescent substance -> adult abuse/dependence

- **Mental, emotional and behavioral (MEB) problems can be prevented**; many risk factors for suicide

- **Suicide attempt rates highest in adolescence**
  - A suicide attempt increases future risk of dying by suicide

*Reducing MEB problems, suicide attempts, and increasing protective processes, can contribute to reducing suicides across the life-span

*Promising programs targeting high-risk and lower-risk youth – need to evaluate and identify how to implement programs effectively*
Youth Suicide Prevention and Intervention in Colorado

ICRC-S Webinar
03.13.13
Jarrod Hindman, MS
(jarrod.hindman@state.co.us; 303.692.2539)
House Bill 00-1432

- Directed the Colorado Department of Public Health and Environment to set up the office of Suicide Prevention to act as the state coordinator for suicide prevention programs throughout Colorado. The Office of Suicide Prevention was created through legislative action in June 2000.

- Allocated $157,830 to fund the OSP

- Fiscal year 2013 - $384,348
Office of Suicide Prevention
www.coosp.org

Mission — To serve as the lead entity for statewide suicide prevention and intervention efforts, collaborating with Colorado communities to reduce the number of suicide deaths and attempts in the state.

OSP Activities
- Community grant making
- HB 2012-1140
- Children’s Hospital Means Restriction Education
- Bridging the Divide: Suicide Awareness and Prevention Summit
- Public information and education campaigns, clearinghouse, & presentations
- Man Therapy – www.mantherapy.org
- 1.800.273.TALK (8255)
- Suicide Prevention Coalition of Colorado
The Top 10 (2010)
1. Wyoming (23.2)
2. Alaska
3. Montana
4. Nevada
5. New Mexico
6. Idaho
7. Oregon
8. **Colorado (17.2)**
9. South Dakota
10. Utah

US: 12.4/100,000

CDC WISQARS

Reports for All Ages include those of unknown age.
* Rates based on 20 or fewer deaths may be unstable. States with these rates are cross-hatched in the map (see legend above). Such rates have an asterisk.

The standard population for age-adjustment represents the year 2000, all races, both sexes.

Produced by: Office of Statistics & Programming, National Center for Injury Prevention & Control, CDC
Data Sources: NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.
Partnering to create suicide-safe schools and communities by training adults who work with high risk youth:

- Juvenile Justice System
- Child Welfare System
- Hispanic/Latino(a) Youth
- LGBTQ Youth
Project Safety Net – 2006-2009


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<th></th>
<th>ASIST</th>
<th>QPR</th>
<th>Total</th>
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<tbody>
<tr>
<td>Trainings</td>
<td>41</td>
<td>107</td>
<td>148</td>
</tr>
<tr>
<td>Participants</td>
<td>737</td>
<td>1,716</td>
<td>2,453</td>
</tr>
<tr>
<td>Male</td>
<td>115</td>
<td>418</td>
<td>21.7%</td>
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<tr>
<td>Female</td>
<td>494</td>
<td>1,061</td>
<td>63.4%</td>
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- Trainees showed improvement from pre to post test on knowledge, self-efficacy, and intentions to inquire and/or intervene
- At follow-up, trainees reported 774 total interventions
Project Safety Net – 2009-2012

- 22 counties (5 urban, 17 rural) – JJ, CW, Hispanic, LGBTQ

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<tr>
<td>Trainings</td>
<td>46</td>
<td>165</td>
<td>211</td>
</tr>
<tr>
<td>Participants</td>
<td>970</td>
<td>3,459</td>
<td>4,429</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td>1,020 (28.7%)</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td>2,517 (70.8%)</td>
</tr>
<tr>
<td>Transgender</td>
<td></td>
<td></td>
<td>14 (0.4%)</td>
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- Trainees showed improvement from pre to post test on knowledge, self-efficacy, & intentions to inquire/intervene
- At follow-up, trainees reported 242 total interventions w/ referrals
LGBTQ Youth Initiatives

- PSN – LGBTQ Brochure

- Safe Talk / LGBTQ information session
  - Jefferson Center for Mental Health & GLBT Community Center of Colorado
  - ½ day information session + ½ day Safe Talk
  - More than 300 trained to date

- Colorado Anti-Violence Project
  - Office of Suicide Prevention & the Sexual Violence Prevention Program
  - Film made by and for youth from throughout Colorado – being finalized now
Colorado’s 10 Winnable Battles

1. Clean Air
2. Clean Water
3. Infectious Disease Prevention
4. Injury Prevention
5. Mental Health & Substance Abuse
6. Obesity
7. Oral Health
8. Safe Food
9. Tobacco
10. Unintended Pregnancy
Youth Suicide Prevention and Intervention Symposium

- 600 school personnel have attended 4 symposia
- State of the state
- Conducting risk assessments
- Postvention
- School-based programs and planning
CO House Bill 2012 - 1140

- 95 CDPHE licensed hospitals in CO
- Information and materials at time of discharge for patients and families
- Assessment of hospitals to identify current practices, gaps and needs
Fiscal Year 2014

- Means Restriction Education – Children’s Hospital

- New Hampshire Gun Shop Project – CO Pilot
Other CO Programs

► Second Wind Fund – thesecondwindfund.org
► Safe2Tell – 877.542.SAFE - safe2tell.org
► Yellow Ribbon - yellowribbon.org
► The FIRE Within – carsonjspencer.org/programs/firewithin
► Sources of Strength - sourcesofstrength.org
► Judy’s House – judishouse.org
“We will have to repent in this generation not merely for the hateful words and actions of the bad people, but for the appalling silence of the good people.”

Dr. Martin Luther King, Jr.
Questions?
Thank You!

Please take a moment to take our webinar evaluation:

http://www.surveymonkey.com/s/icrcswebinar031313

Save the date for our follow-up conference call:
March 20, 2013 from 2-3 PM ET on

Click here to register