PROGRESS IN SUICIDE PREVENTION: STATE OF THE SCIENCE

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DISCLOSURE STATEMENT

Scientific Advisory Board
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Patents
Method and devices for transdermal delivery of lithium (US 6,375,990 B1)
Method of assessing antidepressant drug therapy via transporter inhibition of monoamine neurotransmitters (US 7,148,027 B2)
The suicide rate was 10.8/100,000 in 2003.

It exceeds the rate of homicide greatly (6.1/100,000).

Suicide is considered to be the second leading cause of death among college students.

Suicide is the third leading cause of death for youth.

Suicide is the fourth leading cause of death for adults between the ages of 18 and 65.
Research shows that during our lifetime:

- 20% of us will have a suicide within our immediate family.
- 60% of us will personally know someone who dies by suicide.
ANNUAL DEATHS, BY CAUSE

Number of Deaths, by Cause, 2002

Causes of Death

Asthma
HIV/AIDS
Parkinson's Disease
Suicide
Breast Cancer
Diabetes

Number of Deaths

5,000
14,095
17,997
31,655
40,410
73,249

0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
Research Dollars Spent by NIH, FY 2004, by Cause

Causes of Death

- Asthma
- HIV/AIDS
- Parkinson's Disease
- Suicide
- Breast Cancer
- Diabetes

Research Dollars Spent by NIH in Millions

- $2,850
- $996
- $708
- $272
- $224
- $33
A number of psychological autopsy studies have found that approximately 90% of all completed suicides could be retrospectively diagnosed with a major mental disorder.
Prediction is hard, especially when you’re talking about the future.

Yogi Berra
SUICIDE IS AN OUTCOME THAT REQUIRES SEVERAL THINGS TO GO WRONG ALL AT ONCE.

-- There is no one cause of suicide and no single type of suicidal person.

**Biological Factors**
- Familial Risk
- Serotonergic Function
- Neurochemical Regulators
- Demographics
- Pathophysiology

**Predisposing Factors**
- Major Psychiatric Syndromes
- Substance Use/Abuse
- Personality Profile
- Abuse Syndromes
- Severe Medical/Neurological Illness

**Proximal Factors**
- Hopelessness
- Intoxication
- Impulsiveness Aggressiveness
- Negative Expectancy
- Severe Chronic Pain

**Immediate Triggers**
- Public Humiliation
- Shame
- Access To Weapons
- Severe Defeat
- Major Loss
- Worsening Prognosis
• This said, psychiatrists may be held liable (if sued) should an intentional injury or suicide result from what retrospectively might be judged by experts to have been foreseeable.*

• The question retrospectively addressed is: Was there sufficient evidence to suggest to a reasonable clinician, making a reasonable assessment, that a patient’s suicide (or nonfatal attempt) could have been anticipated?

• The question prospectively addressed is: Might this patient sitting with me here and now be about to attempt to take his or her own life?

* As a psychiatrist, you may have already had experience with the death of a patient by suicide. One-half of psychiatrists in practice for about 20 years will have a patient die by suicide (Chemtob et al, 1988). Biologically oriented psychiatrists have been found to be more at risk of a patient suicide (Ruskin et al, 2004).
REASONABLY FORMULATING A PATIENT’S RISK FOR SUICIDE REQUIRES BOTH AN UNDERSTANDING OF RESEARCH-BASED RISK FACTORS AND AN ARTICULATED RATIONALE FOR MAKING A JUDGMENT ABOUT THE PATIENT’S LEVEL OF RISK.
CASE EXAMPLE – “MR. AJ”

- 43 year old male self-referred for outpatient evaluation of depressive symptoms
- Positive neurovegetative profile
- Endorses passive suicidal ideation
- Drinks alcohol daily – increasing use recently
- No past history of suicide attempt
- Grandfather died by suicide
ASSESSING A PATIENT’S RISK FOR SUICIDE BEGINS WITH UNDERSTANDING RESEARCH-BASED RISK FACTORS
There is no valid actuarial system, e.g. no assessment scale with a cutoff score, that has any validity in the assessment of suicide risk. Rating scales may, however, be helpful to establish the degree to which a patient has an individual risk factor, e.g., is depressed (e.g. Beck Depression Scale) or hopeless (e.g., Beck Hopelessness Scale), as a part of a complete risk evaluation.
CASE EXAMPLE

- Mr. AJ’s Beck Depression Inventory – II score is 29
- His Alcohol Use Disorders Identification Test–Consumption (AUDIT-C) score is 9
There is no substitute for a good psychiatric interview and an empathic understanding that suicide is a potential consideration/action for each and every patient.

An assessment of suicide risk should be made on--and documented in the medical record of each and every psychiatric patient.

- Many times, a suicide risk assessment is not completed and the potential suicide of a patient is not even considered. Since psychiatrists are often “surprised” by the occurrence of a patient’s suicide, a suicide risk assessment should be made and documented for all patients.
DETERMINATION OF RISK

Psychiatric Examination

- Risk Factors
- Protective Factors
- Specific Suicide Inquiry
- Modifiable Risk Factors

Risk Formulation
Mr. AJ is having marital problems and has felt overwhelmed with increased job demands in the context of layoffs at his company.
TRIGGERING EVENTS

— Loss of social support (friends, family)
— Loss of identity/meaning (job, career, financial, legal problems)
— Loss of independence/autonomy, or function (major health problem)
— Acute psychiatric symptoms (psychosis, depression, panic…)
— Loss of hope/Sense of failure
— Date of a significant past interpersonal loss: Anniversary reaction
• When these occur, your index of suspicion should increase.
• If there is a history of suicidal behavior, e.g., prior attempts, understand the specific triggers for the prior attempt(s) to increase your index of suspicion for situation-specific times and contexts of heightened risk.
• Your patient’s history of coping reasonably with typical triggers, unless compromised by psychiatric symptoms, etc., should lower your index of suspicion.
• Acute stressors (in the context of vulnerability)
  — Real/threatened losses of valued/desired attachments
  — Acute disappointments
  — Threat of legal action/incarceration
  — Embarrassments, humiliations, threat to status/ego
  — Threat of/actual loss of job/financial loss
  — Chronic health problems with pain, deterioration, stigmatization, cognitive impairment, dependency (males), debilitation, burdensomeness...
OBTAINING ASSESSMENT DATA: SKILL SET III

- **Elicit Suicide Ideation and Plans**
  - **Within past 48 hours**
    - Current actions, intent, planning vs. impulsivity, role of alcohol and/or drugs, stressors.
  - **Within past 2 months**
    - Preparations for current event in thought or action.
  - **Past**
    - Most serious past attempt, numbers of attempts, past triggers
  - **Current**
    - At time of interview, current thoughts, lethality of plan, if present...

- **Know how to elicit ideation**

  » (Shea, S. 2002. The practical art of suicide assessment)
• Suicidality begins with a desire to die and may move toward preparation and planning.

• Suicide ideation may be actively or passively expressed or denied.
  — There is no convincing research evidence to support the belief that passive ideation is less linked (than active ideation) to future suicidal behavior.
  — Denied ideation does not equate to no risk.

• Assessing risk begins by asking questions.
SUICIDE IDEATION QUESTIONS

- Have things been going so badly that you think it’ll never get any better?
- In the past week, including today, have you felt like life is not worth living?
- In the past week, including today, have you wanted to kill yourself?
- Are you having thoughts about suicide?
IF PRESENT, EXPLORE SUICIDAL IDEATION

- Frequency
- Intensity (How demanding are the thoughts?)
- Duration (How enduring are the thoughts?)
- Specificity (method, place, time, etc.)
- Intention (aim or goal)
- Lethality (perceived and actual)
- Planning and/or rehearsal behaviors
- Impulsivity (Could thought turn to behavior without planning?)
- Risk/rescue probability if acted upon
- Perceived ability to control thoughts
We can neither predict that suicidal behavior will occur, nor differentiate which outcome behavior may result, even if we assess risk for that behavior. Suicidal behaviors include:

- Death by suicide
- Non-fatal suicidal behaviors
  - May be a single episode or repetitive
  - Range from low lethality (“gestures”) to high lethality
    ** need to differentiate from self-harm behaviors (non-suicidal self-injury)
- Suicide ideation (a communicated cognition)
SELF-HARM BEHAVIORS
(NON-SUICIDAL SELF-INJURY)

- Patients who cut or burn themselves are often referred to as self-mutilators, self-injurers, or self-harmers.
- Self-harm behaviors have a different intent – typically to reduce tension or to feel pain.
- Self-harm behaviors, although not having intent to die, are still significant risk factors for suicide.
NONFATAL ATTEMPT V. SELF-HARM

- **Intent**: escape pain; end life
- **Lethality**: Low to High
- **Repetition**: Single to multiple
- **Methods**: Typically same across multiple attempts unless lethality increases
- **Psychological Pain**: Unendurable
- **Cognitive Constriction**: Extreme; Tunnel vision – permanent solution
- **Hopelessness**: Core issue
- **Reinforcement**: treatment required for improvement
- **Core Problem**: Depression, unendurable pain

- **Intent**: Relief from unpleasant affect (tension, anger, emptiness…)
- **Lethality**: None to Low
- **Repetition**: Frequently chronic pattern
- **Methods**: Usually more than one
- **Psychological Pain**: Uncomfortable, intermittent
- **Cognitive Constriction**: Little to none; temporary solution
- **Hopelessness**: Periods of optimism and control
- **Reinforcement**: Decrease in discomfort; alteration of consciousness
- **Core Problem**: Body alienation

after Walsh, B. (2006)
Mr. AJ reports feeling that he would be better off dead right now, but states, “I wouldn’t do anything to hurt myself”

He has had thoughts of suicide in the past during the end of his first marriage

He has not attempted suicide previously
• Mr. AJ provides release of information for his wife to provide history
• She notes concerns related to his loss of energy, sleeplessness, increased anxiety and increasing alcohol use over the past two months
I’m still hopeful things will work out

I couldn’t bear to hurt my children

I have responsibilities to my family

My music

I have a great deal to look forward to

I want to go to heaven
ELICIT REASONS FOR DYING

No way out!!

I can’t take the pain anymore

I’ll show them!

Everyone will be better off if I’m gone

I just want to be with him/her

I don’t deserve to live
Perpetuating risk factors

Typically, these are historic and static/unchangeable, but are associated with higher lifetime risk for suicide – they increase the patient’s vulnerability to be in a suicidal state:

— **Family history** (of violence, suicide, suicidal behavior, mental disorder [requiring hospitalization])

— **Previous suicidal behavior** (risk is greater if multiple past attempts, and/or high lethality of or low rescuability of any prior attempt)

— **Skill deficits** (social, cognitive…)

— **Multiple/chronic personal losses**

— **History of developmental trauma** (e.g., abuse, neglect, family violence, early bullying, victimization)

— **Prior history of violence** – toward others (assaultive behaviors, bullying), toward animals…
RISK FACTORS FOR SUICIDAL BEHAVIOR

• **Predisposing risk factors** (can change through intervention):
  — Poor self-esteem/Self-concept
  — Psychiatric illness
  — Chemical dependency
  — Physical illness
  — Exposure to suicidal behavior
  — Impulsivity/aggressivity
FREQUENCY OF MENTAL DISORDER DIAGNOSIS IN COMPLETED SUICIDE

- **Affective Disorders**
  - Range: 39-89%; Median: 61%

- **Substance Abuse**
  - Range: 19-63%; Median: 41%

- **Anxiety Disorders**
  - Range: 3-27%; Median: 10%

- **Schizophrenias**
  - Range: 0-16%; Median: 6%

- **Axis II Disorders**
  - Range: 31-57%; Median: 42%

- Data from 16 Psychological Autopsy Studies: see Tanney in Maris, Berman, & Silverman (2000)
PERSONALITY DISORDERS AND SUICIDE

• Borderline Personality Disorder
  ▪ Lifetime risk of suicide: 8-10% (ApA, 2000)
  ▪ Risk of suicide if comorbid with alcohol problems: 19%
  ▪ Risk of suicide if comorbid with alcohol problems and major affective disorder: 38% (Stone 1993).
  ▪ Lifetime risk of nonfatal suicide attempt: 60-70% (Gunderson, 2001)

• Antisocial Personality disorder
  ▪ Suicide associated with narcissistic injury/impulsivity.
DEPRESSION: ANNUAL SUICIDE RATES

GENERAL POPULATION
- 0.01% suicide rate
- 10.7 per 100,000

Those Diagnosed with Mood Disorders
- 0.1% suicide rate
- 106 per 100,000
- \( \geq 10 \) x the general rate
- 15 – 25 x, if history of suicide in family
- 50% - 70% of all suicides were depressed

• 5% lifetime risk (Palmer et al, 2005)
• Heightened risk immediately after hospital discharge
• Non-deficit and paranoid subtypes at greater risk
• Suicide more likely during periods of
  — Improvement after relapse
  — Depressed mood
  — Greater insight and hopelessness
IN ADOLESCENCE:
MAJOR MENTAL DISORDERS AND SUICIDE

• The most prevalent diagnoses are:
  — Mood disorders
  — Conduct disorders
  — Substance use disorders
GLOBAL SUICIDE RATES AMONG YOUNG PEOPLE AGED 15-19

Danuta Wasserman, Qi Cheng, Guo-Xin Jiang

Global suicide rates among adolescents in the 15-19 age group, according to the latest World Health Organization (WHO) Mortality Database, were examined. Data for this age group were available from 90 countries (in some cases areas) out of the 130 WHO member states. The mean suicide rate for this age group, based on data available for the latest year, was 7.4/100,000. Suicide rates were higher in males (10.5) than in females (4.1). This applies in almost all countries. The exceptions are China, Cuba, Ecuador, El Salvador and Sri Lanka, where the female suicide rate was higher than the male. In the 90 countries (areas) studied, suicide was the fourth leading cause of death among young males and the third for young females. Of the 132,423 deaths of young people in the 90 countries, suicide accounted for 9.1%. The trend of suicide rates from 26 countries (areas) with data available during the period 1965-1999 was also studied. A rising trend of suicide in young males was observed. This was particularly marked in the years before 1980 and in countries outside Europe. The WHO database is the largest of its kind and, indeed, the only information source that can currently be used for analysis of global mortality due to suicide. Methodological limitations are discussed.
SUICIDE RATES PER 100,000 YOUNG PERSONS AGED 15-19 IN 26 COUNTRIES (AREAS) WITH DATA AVAILABLE FOR 1965-1999.
## Causes of Death for Young Persons Aged 15-19 in 90 Countries (Areas), According to the WHO Mortality Database, February 2004 (Latest Available Data for Each Country or Area)

<table>
<thead>
<tr>
<th>Causes of death</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Transport accidents</td>
<td>19,643</td>
<td>21.2</td>
<td>6,919</td>
</tr>
<tr>
<td>Other accidents</td>
<td>19,274</td>
<td>20.8</td>
<td>5,084</td>
</tr>
<tr>
<td>Assault</td>
<td>13,735</td>
<td>14.8</td>
<td>2,108</td>
</tr>
<tr>
<td>Suicide</td>
<td>8,801</td>
<td>9.5</td>
<td>3,263</td>
</tr>
<tr>
<td>Neoplasms</td>
<td>5,017</td>
<td>5.4</td>
<td>3,585</td>
</tr>
<tr>
<td>Diseases of the circulatory system</td>
<td>4,966</td>
<td>5.4</td>
<td>3,484</td>
</tr>
<tr>
<td>Diseases of the nervous system</td>
<td>3,765</td>
<td>4.1</td>
<td>2,230</td>
</tr>
<tr>
<td>Diseases of the respiratory system</td>
<td>2,878</td>
<td>3.1</td>
<td>2,061</td>
</tr>
<tr>
<td>Infective and parasitic diseases</td>
<td>2,580</td>
<td>2.8</td>
<td>2,116</td>
</tr>
<tr>
<td>Diseases of the digestive system</td>
<td>1,420</td>
<td>1.5</td>
<td>940</td>
</tr>
<tr>
<td>Congenital malformations, Deformations</td>
<td>1,061</td>
<td>1.1</td>
<td>817</td>
</tr>
<tr>
<td>Endocrine, nutritional and metabolic diseases</td>
<td>850</td>
<td>0.9</td>
<td>859</td>
</tr>
<tr>
<td>Mental and behavioural disorders</td>
<td>457</td>
<td>0.5</td>
<td>188</td>
</tr>
<tr>
<td>Other causes</td>
<td>8,296</td>
<td>8.9</td>
<td>6,026</td>
</tr>
<tr>
<td>Total</td>
<td>92,743</td>
<td>100.0</td>
<td>39,680</td>
</tr>
</tbody>
</table>
Only 15-19% of students who die by suicide had been treated at campus counseling center (Gallagher, Annual Survey of Counseling Center Directors, 1995-2006)

Why is this figure so low?
BARRIERS TO HELP-SEEKING

- Negative attitudes toward treatment
- Fear of negative reactions from parents, friends
- Concerns about confidentiality and potential impact of treatment on academics and career
- Concerns about administrative sanctions
- Worries about costs/issues with parents’ insurance
- Beliefs that problems will resolve on their own
- Perception that problems don’t impact functioning
- Resistance to giving up “control” of own choices
- Too overwhelmed to take necessary steps
3 critical elements:

Increased suicide awareness & education

Outreach to students with serious problems who aren’t receiving treatment

Campus policies/culture that foster help-seeking and protect student safety and confidentiality
• Students are invited to participate via e-mail
• Link is provided to a secure website
• Project procedures are explained in detail
• Students sign up with self-assigned User ID and password
• Complete a brief questionnaire adapted from the Patient Health Questionnaire
• PHQ-9 - a 9-item depression scale (scores of 0-27) plus 1 item assessing impact of problems on functioning

• suicidal ideation and prior suicide attempts

• affective states associated with suicide (rage, desperation, loss of control, etc.)

• alcohol and other drugs

• symptoms of eating disorders
• current therapy and psychiatric medications

• demographics (gender, race/ethnicity and year in school)

• optional: e-mail address (encrypted in computer system and may or may not be decrypted for follow-up)
  • Dialogue feature
Tier 1 (high risk)

- PHQ-9 score of 15-27 (moderately severe-severe depression)
- current suicidal ideation
- PHQ-9 score of 10-14 (moderate depression) with prior suicide attempt
- intense rage, desperation or loss of control
- current problems making it “very” or “extremely” difficult to function
Tier 2 (moderate risk)

- PHQ-9 scores of 10-14 (moderate depression)
- Problems related to alcohol or drug use or eating behaviors
- Current problems making it “somewhat” difficult to function

Tier 3 (low risk)

- Not meeting any of Tier 1 or Tier 2 criteria
• Based on tier designation, student receives immediate online information about when to expect response (normally w/in 24 hours)

• System sends clinician an e-mail with link to the student’s questionnaire

• Counselor confirms tier, writes a detailed, personal response and posts it on website

• Student is notified via e-mail (with link to website)
• Includes counselor’s name and contact information
• Key goal – make empathetic connection
• Urges in-person meeting (Tiers 1 and 2)
• Invites all students to engage in anonymous online “dialogue” with clinician
• Over next 6 weeks, Tier 1 and 2 students receive multiple e-mail reminders to get the response and follow recommendations

• Final e-mail includes brief questionnaire on reasons for not contacting clinician
• Screening clinician provides in-person evaluation and is available for treatment

• Student consent is obtained for clinician to submit evaluation and treatment reports (identified by User ID only)
• 14,500 undergraduates at two universities invited to participate
• 8% responded to questionnaire (vs. 10-15% of student body likely to be at-risk)
• Demographically representative of student body except: over-representation of females (72% of respondents vs. 56% of all students)
Tier designation:
- Tier 1 – 50%
- Tier 2 – 35%
- Tier 3 – 15%

Over 90% were not receiving any form of treatment
- Including most severely depressed
- Including those with current suicide ideation
• 20% of Tier 1 & 2 respondents came for in-person evaluation

• 14% of Tier 1 & 2 respondents entered treatment (2/3 = Tier 1)

• Those who “dialogued” were 3 times more likely to come for evaluation (38% vs. 12%) and to enter treatment (25% vs. 9%)
• 11.1% endorsed current (past 4 week) suicide ideation
• 16.5% reported lifetime suicide attempt or episode self-injurious behavior
• 28.5% with PHQ-9 ≥ 15 had current suicide ideation
• 5.7% with PHQ-9 < 15 had current suicide ideation
RELATION BETWEEN DEPRESSION SEVERITY AND SUICIDE IDEATION

![Graph showing the relation between depression severity and suicide ideation. The x-axis represents depression severity categories (none, mild, moderate, mod severe, severe) based on PHQ-9 scores, and the y-axis represents the percent suicide ideation. The graph shows a clear increase in suicide ideation with increasing depression severity.](image)
## RELATION BETWEEN STRONG EMOTIONAL STATES AND SUICIDE IDEATION

<table>
<thead>
<tr>
<th></th>
<th>Suicidal ideation (n=81)</th>
<th>No suicidal ideation (n=646)</th>
<th>*Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>92.6 (75)</td>
<td>75.35 (486)</td>
<td>(χ²=15.2, p&lt;0.0002)</td>
</tr>
<tr>
<td>Irritability</td>
<td>74.1 (60)</td>
<td>56.8 (367)</td>
<td>(χ²=9.4, p&lt;0.003)</td>
</tr>
<tr>
<td>Panic</td>
<td>39.5 (32)</td>
<td>25.0 (161)</td>
<td>(χ²=7.3, p&lt;0.007)</td>
</tr>
<tr>
<td>Rage</td>
<td>50.6 (41)</td>
<td>26.5 (171)</td>
<td>(χ²=18.7, p&lt;0.0001)</td>
</tr>
<tr>
<td>Desperation</td>
<td>71.6 (58)</td>
<td>35.1 (226)</td>
<td>(χ²=39.5, p&lt;0.0001)</td>
</tr>
<tr>
<td>Out of control</td>
<td>63.75 (51)</td>
<td>32.3 (207)</td>
<td>(χ²=29.2, p&lt;0.0001)</td>
</tr>
<tr>
<td>Functional impairment</td>
<td>53.75 (43)</td>
<td>24.0 (150)</td>
<td>(χ²=28.5, p&lt;0.0001)</td>
</tr>
</tbody>
</table>
• 85% of students with PHQ-9 ≥ 15 were **NOT** in treatment

• 84% of students with current suicide ideations were **NOT** in treatment
For every 1,000 students invited:

- 80 completed the screening questionnaire, 68 designated as Tier 1 or 2
- 19 engaged in online dialogues
- 13 came for an in-person evaluation
- 9 entered treatment (6 in Tier 1)

Requires one FTE social worker or psychologist for every 12,000 students

10% FTE psychiatrist
“This may sound silly but it has held me back from trying to talk to someone earlier: are there any repercussions for coming in? Last year I overdosed on a bunch of pills and I cut up my body. My father flew down here to kind of help me out...he said that it was probably a good thing that I did not go to the hospital because they would have to report a suicide attempt or something and it could get me kicked out of school. If I admit to that or talk about my depression will I get in trouble?”
“I wouldn’t mind meeting you…One thing is bothering me, though: my parents used to pay for my therapists back home, but if I tell them now that I’m thinking of going back to therapy they would get really worried about me and might want me to withdraw or something…But then, I wouldn’t be able to pay on my own if it’s as expensive as seeing private psychiatrists were…What do you think I should do?”
“I know that I definitely have food issues…I spend way too much time thinking about food and it tends to take over my life sometimes. I can’t remember the last time I wasn’t on a diet…I have problems actually talking about it face to face with people…I guess I’ve viewed counseling as a sign of weakness and I would be mortified if people knew I had to go…Thank you for taking the time to respond and I apologize for being “too chicken” to come for an actual session. This is the best I can do right now…”
"I’ve had a really bad year and it seems like I am either super happy or super sad, like right now I am sitting here crying on my bed and I couldn’t even tell you why exactly…I think what I am most stressed out [about] (which makes me contemplate whether I should even live any more or not) is really stupid and even I can recognize that it is dumb. I feel like I am so lost because I am so undecided about my future that I lose sleep at night. My parents will not stop bugging me about a major or a career and I’m beginning to think that no matter what major or career I choose I will hate it. My friends would probably never guess I’m depressed. I try very hard to hide it…but in the end it makes it worse because I feel like I’m not being who I really am. I think the depression questionnaire was a God-send before I did something stupid. People looking at my life from the outside in would see a very normal happy childhood and I have a great family and people who love me, so I almost feel guilty about being so sad. I don’t have a real reason to be I guess… This is really long, but it’s nice to get it all out. Thanks for listening.”
I filled out your survey last semester. You emailed me multiple times, but I thought I had a handle on things and was starting to feel better. My friend committed suicide last week and I am finding it really hard to even get out of bed. It’s just,… I don't know. I thought I could handle this on my own, but I may need help.
PRIOR HISTORY OF SUICIDAL BEHAVIOR

- Prior History of Attempt increases risk for suicide completion 22x

- The Aftermath of Suicide Attempts
  - No further attempt 66%
  - Further attempt(s) 33%
    - New attempt within 1 year 10-20%
    - Completed suicide within 1 year 1-2%
    - Completed suicide (lifetime) 10-15%

Fremouw, dePerczel, & Ellis (1990)
<table>
<thead>
<tr>
<th>Illness</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>6.6</td>
</tr>
<tr>
<td>Malignant neoplasms of Head/Neck</td>
<td>11.4</td>
</tr>
<tr>
<td>Chronic renal failure – dialysis</td>
<td>14.5</td>
</tr>
<tr>
<td>Spinal cord injuries</td>
<td>3.8</td>
</tr>
<tr>
<td>MS</td>
<td>2.4</td>
</tr>
<tr>
<td>Systemic lupus erythmatosis</td>
<td>4.3</td>
</tr>
<tr>
<td>Peptic ulcer</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Kelly, Mufson, & Rogers (1999)

**Treatment Tip:** When treating a patient with a significant Axis III Disorder, consult the Internet (e.g. PubMed) for references specific to published research on that disorder and suicide.
Risk of death by suicide increases if:

— Recent diagnosis of life-threatening illness

— Illness is associated with:
  
  • Unremitting, chronic pain
  
  • Functional impairment
  
  • Perceived burdensomeness
  
  • Hopelessness re prognosis
SUICIDE BY FIREARMS

- The risk of suicide of a household member is increased nearly five times in homes with guns (versus those without).
  
  (Kellerman, 1992)

- Guns in the home, particularly loaded guns, are associated with increased risk for suicide by youth, irrespective of whether these youth have identifiable mental health problems or suicidal risk factors.

  (Brent et al, 1993)
Figure 3. Method specific suicide rates per 100,000 Danish women, from 1970 to 2000, selfpoisoning.
Figure 1. Method-specific suicide per 100,000 men, Denmark 1970-2000, self-poisoning.

- Rate other drugs, men
- Suicide rate, barbiturates, men
- Suicide rate, household gas, men
- Suicide rate, car exhaust, men
- Suicide rate, antidepressants, men
- Suicide rate, analgetics, men
Medical doctors have a higher suicide rates than other professions

- Especially female doctors
- Especially due to suicide with self-poisoning
- This might reflect knowledge and availability

SOME SUICIDES ARE PREVENTED DUE TO LACK OF KNOWLEDGE ABOUT DANGEROUS MEANS
### STUDY OF SUICIDES IN DANISH OCCUPATIONS

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>NO. OF CASES / CONTROLS</th>
<th>RATE RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical doctors</strong></td>
<td>36/344</td>
<td>2.73 (1.77-4.22)</td>
</tr>
<tr>
<td>A residual group without occupation</td>
<td>6884/132916</td>
<td>2.47 (1.87-3.28)</td>
</tr>
<tr>
<td><strong>Nursing associate professionals</strong></td>
<td>40/530</td>
<td>2.04 (1.34-3.11)</td>
</tr>
<tr>
<td>Bricklayers and stonemasons</td>
<td>26/388</td>
<td>1.76 (1.09-2.84)</td>
</tr>
<tr>
<td>Painters and related workers</td>
<td>26/388</td>
<td>1.73 (1.07-2.79)</td>
</tr>
<tr>
<td>Cooks</td>
<td>21/335</td>
<td>1.72 (1.03-2.88)</td>
</tr>
<tr>
<td>Carpenters and joiners</td>
<td>56/993</td>
<td>1.49 (1.02-2.18)</td>
</tr>
<tr>
<td>Mail carriers and sorting clerks</td>
<td>30/642</td>
<td>1.25 (0.80-1.97)</td>
</tr>
<tr>
<td><strong>Primary education teaching professionals</strong></td>
<td>57/1496</td>
<td>1</td>
</tr>
<tr>
<td>Secretaries</td>
<td>43/1198</td>
<td>0.97 (0.65-1.46)</td>
</tr>
<tr>
<td>Shop salespersons and demonstrators</td>
<td>33/1138</td>
<td>0.79 (0.51-1.22)</td>
</tr>
</tbody>
</table>
The Sorrows of Young Werther
(1774)

Johann Wolfgang von Goethe
(1749 ~ 1832)

Werther’s effect
"THE WERTHER EFFECT AFTER TELEVISION FILMS: NEW EVIDENCE FOR AN OLD HYPOTHESIS,"

- Showed a significant increase in number of suicides among males (15-29 year old) with the same method (suicide in front of a train) in a five week period after a two week TV campaign.
- Same finding when the campaign was repeated.
Final Exit recommended poisoning and suffocation by plastic bag as lethal means of suicide for terminally ill.

Marzuk et al examined the number of suicides involving these methods in the United States in 1991, the year the book was published, compared with 1990.

Suicidal asphyxiations involving a plastic bag increased 30.8%, (from 334 to 437), and poisonings increased 5.4%, (from 3,143 to 3,314).

There was no change in the number of suicides involving each of the other methods or in the total number of suicides between 1990 and 1991.


"Increase in fatal suicidal poisonings and suffocations in the year Final Exit was published: a national study," Am. J. Psychiatry 151(12), 1813 (1994). P. M. Marzuk, K. Tardiff, and A. C. Leon,
• easily accessible – much easier than books
• world-wide
• anonymous
• interactive
• Profiles of suicidal people and internet-addicted persons are similar (e.g. withdrawn, lack of social support, low self-esteem, etc.)
The following acute risk factors have been found to be most associated with increased risk in the near-term and may be readily recalled via IS PATH WARM?
IS PATH WARM?

- **I** Ideation/threatened or communicated
- **S** Substance Abuse/excessive or increased
- **P** Purposeless/no reasons for living
- **A** Anxiety, Agitation/Insomnia
- **T** Trapped/feeling no way out
- **H** Hopelessness
- **W** Withdrawal from friends, family, society
- **A** Anger (uncontrolled)/rage/seeking revenge
- **R** Recklessness/excessively risky acts - unthinking
- **M** Mood changes (dramatic)
RELATIVE RISK OF COMPLETED SUICIDE

- Discharge from Psychiatric Hospital
  - Last week: 278*
  - Last month: 133
  - Last year: 34-61

*Particularly for brief hospitalization for affective disorder with symptom improvement; limited external resources

*Qin & Nordentoft (2005)