How Can We Better Serve the Underserved?
Demand, Utilization, and Capacity for Mental Health and other Basic Needs and Its Connection to Retention

Brian Mistler, PhD
Executive Director
Student Health and Wellbeing Services
Student Affairs at Humboldt State University
* A suicide occurs approx. every 17 minutes in the US, & suicide is the 2nd leading cause of death among college students.
* 20% of us will have a suicide within our immediate family.
* 60% of us will personally know someone who dies by suicide (a low estimate due to stigma)
Maslow’s Needs Theory & Viktor Frankl

When lower order needs are not fulfilled:

1) It becomes harder to focus on all needs
   • Can’t focus on studying for class if hungry

2) Psychological needs are MORE important
   • Chronic resource insecurity and feeling unsafe
     -> anxiety, hopelessness, and depression
   • Meaning, belonging, and self-fulfillment help one cope with injustice and resource insecurity.
Suicidality points us clearly to the need for belonging, safety, resource security, and all other basic needs

Understanding suicide means understanding mental health

A clearer understanding of suicide helps campuses make the best decisions clinically and as a campus to support students

ALSO usually the best legal risk management decisions

AND the best financially AND key to improve retention

There is actually a lot we know as a field...
Gratitude for Support and Key Data/Slide Sources

• 2016 ACHA/NCHA Campus Survey
• Dr. Lisa Castellino, AVP Office of Institutional Effectiveness at HSU
• Peggy Metzger, Director of Financial Aid at HSU
• 2017 Health Minds Survey Dr. Daniel Eisenberg and team
• Jen Sanford, CAPS Director and Associate Director SH&WS at HSU
• Brennen Rose, Health Data and Systems Coordinator for HSU SH&WS
• AUCCCD Director’s Survey Team 2013-present
• David Klonsky, Ph.D. and co-researchers in the Three Step Theory (3ST)
National Average # of Students taken to Hospital for Acute Psychological Reasons (per 8000 students)
Risk Assessment: The Data

Risk Assessment: The Data

# Risk Assessment: The Data

## 10 Leading Causes of Death by Age Group, United States – 2014

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
<th>Total</th>
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<tbody>
<tr>
<td>1</td>
<td>Congenital Anomalies</td>
<td>4,746</td>
<td>Unintentional Injury</td>
<td>1,216</td>
<td>Unintentional Injury</td>
<td>730</td>
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<td>2</td>
<td>Short Gestation</td>
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<td>436</td>
<td>Suicide</td>
<td>426</td>
<td>Suicide</td>
<td>6,079</td>
<td>Suicide</td>
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<td>3</td>
<td>Maternal Pregnancy Comp.</td>
<td>1,574</td>
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<td>4</td>
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<td>321</td>
<td>Homicide</td>
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<td>Heart Disease</td>
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<td>Influenza &amp; Pneumonia</td>
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<td>Chronic Low Respiratory Disease</td>
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<td>Heart Disease</td>
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<td>Congenital Anomalies</td>
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<td>Liver Disease</td>
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<td>7</td>
<td>Bacterial Sepsis</td>
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<td>Chronic Low Respiratory Disease</td>
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<td>Influenza &amp; Pneumonia</td>
<td>57</td>
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<td>71</td>
<td>Influenza &amp; Pneumonia</td>
<td>196</td>
<td>Diabetes Mellitus</td>
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<td>8</td>
<td>Respiratory Distress</td>
<td>460</td>
<td>Septicemia</td>
<td>63</td>
<td>Cerebrovascular Disease</td>
<td>46</td>
<td>Cerebrovascular Disease</td>
<td>43</td>
<td>Diabetes Mellitus</td>
<td>181</td>
<td>HIV</td>
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<td>9</td>
<td>Circulatory System Disease</td>
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<td>Benign Neoplasms</td>
<td>38</td>
<td>Influenza &amp; Pneumonia</td>
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<td>Chronic Low Respiratory Disease</td>
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<td>Cerebrovascular Disease</td>
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<td>Neonatal Hemorrhage</td>
<td>441</td>
<td>Prenatal Period</td>
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<td>33</td>
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<td>38</td>
<td>Cerebrovascular Disease</td>
<td>177</td>
<td>Influenza &amp; Pneumonia</td>
</tr>
</tbody>
</table>

Risk Assessment: The Data

Importance of Integrated Services

National Counseling Center primary concerns (Mistler et al. 2014)

- Anxiety: 40.4%
- Depression: 38%
- Relationships: 36.3%
- Psychotropic Medication: 15.2%
- Suicidal Ideation: 12.7%
- Other: 11.3%
- Alcohol Use: 9%
- Self-injury: 8.3%
- Drug Use: 8%
- ADHD: 7.6%
- Learning Disability: 7.6%
- Sexual Assault: 7%
- Eating Disorder: 5.4%
- Oppression: 5.4%
- Harassment: 2.5%
Priorities for mental health basic needs services:

1. More physical/mental service integration & case mgmt
2. Increase access to psychiatry
3. Improve training in four key areas
   A) Assessment B) gatekeeper, C) implicit bias
   D) Engagement with changing national best practices
4. Close the Need-Capacity Gap for Therapists & others
5. Robust, targeted health education w/ peer component
<table>
<thead>
<tr>
<th>Module A: Data &amp; Basic Resources</th>
<th>Who do we serve? Introduction to what know about students mental health, the processes used to evaluate our student's need and to the health and wellbeing services offered on campus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module B: Campus Connect Suicide Prevention Training</td>
<td>Built on the program developed by the Syracuse University Counseling Center, the experientially based training is designed to enhance participant’s knowledge, awareness, and skills concerning college student suicide. Plus two added modules on Postvention and Suicide Theory anyone can use.</td>
</tr>
<tr>
<td>Module C: Check IT Presentation &amp; Mindfulness</td>
<td>Bystander intervention program Check IT, mindfulness and gratitude practices, as well as reflection &amp; boundary building skills for Wellbeing Ambassadors.</td>
</tr>
<tr>
<td>Module D: Adverse Childhood Experiences &amp; Role Play</td>
<td>Detailed look at how Adverse Childhood Experiences (ACEs) and trauma can affect students experience in college as well as how to increase students feelings of belonging on campus.</td>
</tr>
</tbody>
</table>
Suicidology

Suicide assessment and prevention training works
  * More likely used than CPR / less frequently given

Three-Step Theory (3ST) - new empirically grounded framework
  * Developed by David Klonsky and Alexis May -
    * Development of suicide ideation and progression to suicide attempts are distinct processes with distinct explanations

Why do we need a new approach or framework?
Risk Factors for Suicide

- Mood disorders
- Schizophrenia
- Anxiety disorders
- Some personality disorders
- Alcohol and substance use
- Impulsivity
- Aggressive tendencies
- History of trauma
- Physical and sexual abuse
- Major physical illness
- Chronic pain
- Family history of suicide
- Suicidal friend
- Job/financial loss
- Relationship loss
- Other stressful life event
- Lack of social support
- Barriers to health care
- Cultural/religious beliefs
- Female gender
- Poor problem solving skills
- History of non-suicidal self-injury
- Past attempt
Despite this knowledge...

- Suicide rates increasing in the US
- Suicide prediction has not improved since 1960s
  (New meta-analysis by Joe Franklin and colleagues; in revision)

Why?
Oft-Cited Predictors of Suicide

- Mental Disorders
  - Major Depression
  - Anxiety Disorders
  - Substance Disorders
  - Multiple Diagnoses
- Hopelessness
- Impulsivity/Aggression
### What Do These Predictors Predict?

**Clinical Disorder** | **Non-Suicidal vs. Suicide Attempter**
---|---
Major Depression | 11.0
Any Mood Disorder | 12.9
Any Anxiety Disorder | 3.2
Any Substance Disorder | 5.8
Any Disorder | 6.7
3+ Disorders | 19.7

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)
<table>
<thead>
<tr>
<th>Clinical Disorder</th>
<th>Non-Suicidal vs. Suicide Ideator</th>
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</thead>
<tbody>
<tr>
<td>Major Depression</td>
<td>9.6</td>
</tr>
<tr>
<td>Any Mood Disorder</td>
<td>10.7</td>
</tr>
<tr>
<td>Any Anxiety Disorder</td>
<td>2.9</td>
</tr>
<tr>
<td>Any Substance Disorder</td>
<td>3.9</td>
</tr>
<tr>
<td>Any Disorder</td>
<td>5.7</td>
</tr>
<tr>
<td>3+ Disorders</td>
<td>14.3</td>
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</tbody>
</table>

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)
<table>
<thead>
<tr>
<th>Clinical Disorder</th>
<th>Suicide Ideator vs. Attempter</th>
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</thead>
<tbody>
<tr>
<td>Major Depression</td>
<td>2.0</td>
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<tr>
<td>Any Mood Disorder</td>
<td>1.8</td>
</tr>
<tr>
<td>Any Anxiety Disorder</td>
<td>1.2</td>
</tr>
<tr>
<td>Any Substance Disorder</td>
<td>1.6</td>
</tr>
<tr>
<td>Any Disorder</td>
<td>1.0</td>
</tr>
<tr>
<td>3+ Disorders</td>
<td>1.1</td>
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</tbody>
</table>

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)
Risk factors for suicide don’t tell us what we think they do
What do our predictors tell us?

✅ Who develops suicidal ideation

❌ Who acts on suicidal thoughts
Historically, just a single explanation...

- Social Isolation (Durkheim)
- Psychache (Shneidman)
- Escape (Baumeister)
- Hopelessness (Beck; Abramson)

Except Thomas Joiner’s Interpersonal Theory (2005)
## Risk Factors for Suicide

- Mental Disorders
  - Depression
  - Hopelessness
  - Impulsivity
- Access to Lethal Means
- Expertise in Lethal Means
- Social Contagion

...
## Ideation-to-Action Framework

<table>
<thead>
<tr>
<th>Suicidal Ideation</th>
<th>Suicidal Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Disorders</td>
<td>Acquired Capability</td>
</tr>
<tr>
<td>Depression</td>
<td>Access to Lethal Means</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>Expertise in Lethal Means</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>Social Contagion</td>
</tr>
<tr>
<td>Non-Suicidal Self-Injury</td>
<td>Non-Suicidal Self-Injury</td>
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</tbody>
</table>
# Organizing Model for Suicide Risk

<table>
<thead>
<tr>
<th>Pain</th>
<th>Hopelessness</th>
<th>Connectedness</th>
<th>Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychache</td>
<td>Hopelessness</td>
<td>Social Isolation</td>
<td>Acquired Capability</td>
</tr>
<tr>
<td>Depression</td>
<td>Pessimistic Outlooks</td>
<td>Loneliness</td>
<td>Access to Means</td>
</tr>
<tr>
<td>Anxiety</td>
<td>External Locus</td>
<td>Poor Social Support</td>
<td>Knowledge of Means</td>
</tr>
<tr>
<td>Emotion Dysregulation</td>
<td>Learned Helplessness</td>
<td>Low Belongingness</td>
<td>Dispositional Capability</td>
</tr>
<tr>
<td>Mental Disorders</td>
<td>Self-Efficacy</td>
<td>Burdensomeness</td>
<td></td>
</tr>
<tr>
<td>General Distress</td>
<td>Future Orientation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Source: Klonsky and May (2015; International Journal of Cognitive Therapy); Klonsky, May, & Saffer (2016; Annual Review of Clinical Psychology); Klonsky, Saffer, & Bryan (in press; Current Opinion in Psychology)
APPLYING THE 3ST MODEL TO UNDERSTANDING STUDENT RISK IN UNIVERSITY/COLLEGE SETTINGS

Desire for Death

Desire to Live

Psychological Pain

Connectedness

Capability

Hopelessness
Desire for Death

Desire to Live

Psychological Pain

Hopelessness

Connectedness

Capability

Support Resources

APPLYING THE 3ST MODEL TO UNDERSTANDING STUDENT RISK IN UNIVERSITY/COLLEGE SETTINGS
1) **Desire for Death**

- **Are you in pain?**
  - NO: **No Ideation**
  - YES: **Suicidal Ideation**

- **Are you hopeless?**
  - NO: **No Ideation**
  - YES: **Suicidal Ideation**

AND

2) **Desire to Live**

- **Does your pain exceed your connectedness?**
  - NO: **Modest Ideation**
  - YES: **Strong Ideation**

3) **Capability**

- **Do you have capability to kill yourself?**
  - NO: **Remains Ideation**
  - YES: **Suicide Attempt**

- **1) Desire for Death**
  - **2) Desire to Live**
  - **3) Capability**
Live/Die Balance

Not as simple as subtraction – the information is more complicated.

Desire for Death

1  2  3  4  5  6  7  8  9  10

Desire to Live

1  2  3  4  5  6  7  8  9  10

Pain + Hopelessness

Connectedness
Gun Purchase

Smoker

Hospitalization

Stops Smoking

Suicide Attempt

Prescription Overdose

Friend holds gun

A classmate dies by suicide

Gets Gun Back

Resources

Capability

Net Desire
4 Clear Targets for Intervention

1) Reduce Current Pain
2) Increase Hope for Future
3) Improve Connection
4) Reduce Capacity
Increase Student Success

1) Reduce Current Barriers
2) Increase Hope for Future
3) Improve Connection
Improving connection: implicit Bias Training for Healthcare Staff

• “ABC” - Addressing Bias in Care Committee

• Two full-days of focused retreat training:
  • TRANSFORMING FALSE EMPATHY
  • Witness that we live race in different ways
  • Make room for storytelling
  • Watch (ourselves) for projection
  • Finding authentic strength and capacity in others and yourself
  • And more…

• Improving Connections Across Campus and other internal support

• An empirical approach to equity
The Interactive Wellbeing Map

Target non-clinical analogs of top needs:

- Health & Wellbeing Services 101
- Health & Identity
- Physical Health
- Sexual Health & Consent
- Alcohol & Other Drugs
- Mental Health
- Relationships & Belonging
- Food, Nutrition, & Housing
- Adulting Skills and Developing Resilience
Socio-Ecological Campus Wide Support Net
Brodest possible inclusion in “Campus-wide Net”
Campus-wide BiT Team

Training in a campus-wide approach to suicide prevention that includes **AND GOES BEYOND** a BiT team.

- Suicide gatekeeper programs that include suicide postvention
- Training in key **Personality Disorders**
- Understand **suicide, documentation & safety plans**
- Additional **training and focus on lethal means restriction**
Access to Lethal Means

• In 1998, Britain changed paracetamol (Tylenol) packages to require blister packs.

• Over the subsequent 11 years, suicide deaths from Tylenol overdoses declined by 43 percent, and a similar decline was found in accidental deaths from medication poisonings.

• There was also a 61 percent reduction in liver transplants attributed to Tylenol toxicities.
Suicide Postvention

- 567 and 577 youth suicides in 1985 & 1987
- **802** cases in 1986
- Most under 20…

Increase of over 40%

Source: Hong Kong Jockey Club Centre for Suicide Research & Prevention (2010).
Suicide Postvention

• In 1986, young Japanese singer Okada Yukiko died by suicide at 20.
• The Japanese media reported the case extensively and sensationally with photos and detailed descriptions.

Increase of over 40%
Suicide Contaigon

Geographical Proximity

Population At Risk

Psychosocial Proximity
Vulnerable Populations Benchmarks

- Depression:
  - HSU: 61%
  - National College Average: 41%

- Anxiety:
  - HSU: 68%
  - National College Average: 53%

- Psychiatric Med Past Year:
  - HSU: 23%
  - National College Average: 16%

- Knowledge of Services:
  - HSU: 63%
  - National College Average: 63%
Suicidal Ideation (past year) 7-13%

Suicide Plan (last year) 4-9%
Nationally 1-1.5% have attempted suicide in the past year.
Attempted suicide in the past year

Year in School

1: 6% (n=298)
2: 5% (n=276)
3: 3% (n=444)
4: 3% (n=295)
5: 2% (n=116)
6: 10% (n=40)
7: 7% (n=27)
- **More than half of all students use our counseling services**
- 41% of clients have seriously considered suicide
- 11% have a history of mental health hospitalization/s
- 73% anxiety 79% sad/depressed

- Simply **unable to meet the increasing student demand.**
The DUC-DOVE Method

The DUC-DOVE Method is one approach to capturing key factors necessary for resource requirements analysis, summary, and allocation of resources decisions especially in service-related fields.

**Demand, Utilization, and Capacity**

**Disparities** between these and **Outcomes** that result from failing to resolve such disparities.

How such current or potential outcomes align with a hierarchy of **Values** (including ROI).

Subsequently **Executing** the values-based strategic plan to achieve the desired outcomes.
DUC: Demand, Utilization, Capacity over 10-Years
### Proximal Effects

### Disparity and Outcomes

#### [DRAFT-10/3/17] HSU Mental Health Demand, Utilization, & Capacity Requirements (Five Year Projections)

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<thead>
<tr>
<th>[12-13]</th>
<th>[13-14]</th>
<th>[14-15]</th>
<th>[15-16]</th>
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<th>[20-21]</th>
<th>[21-22]</th>
<th>[22-23]</th>
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<td>ENROLLMENT Campus FTE Students</td>
<td>7,649</td>
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<td>8,000</td>
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<td>Demand</td>
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<tr>
<td>Students Unable to Schedule at CAPS</td>
<td>576</td>
<td>612</td>
<td>648</td>
<td>684</td>
<td>648</td>
<td>684</td>
<td>730</td>
<td>731</td>
<td>756</td>
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<tr>
<td>Student Wait &gt; 10 mins Med/Trig</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
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<tr>
<td>Mental Health Services Demand Total</td>
<td>6,699</td>
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<td>7,326</td>
<td>7,670</td>
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<td>Enrollment/Control Demand Growth</td>
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<td>4.5%</td>
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<td>4.5%</td>
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<td>Gen. Medical Provider</td>
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<td>1,240</td>
<td>1,648</td>
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<td>1,872</td>
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<td>6,341</td>
<td>6,348</td>
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<td>7,604</td>
<td>8,626</td>
<td>10,290</td>
<td>10,480</td>
<td>11,830</td>
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<td>At Historical Capacity</td>
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<tr>
<td>Capacity - Staff (Flat Enrollment)</td>
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<td>7.7%</td>
<td>8.6%</td>
<td>11.9%</td>
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#### Notes:
- As utilization further exceeds capacity, actual utilization will become more reliably flattened, and utilization projections will not be hit without required staffing capacity changes, further increasing the demand-capacity gap and number of students with un-met needs. See documents at wellbeing.humboldt.edu data for details.

---

**Campus Unmet Need (HealthyMinds)**

- [2746 students X 5.4 visits/person] = [9248]
- [7282] to [6249] to [3001] to [2306] to [1610]

**Visit Unmet Need (Service Requests)**

- [300] to [200] to [150] to [140] to [125] to [100]

**Counseling Wait Time**

- [3-4] days to [3-months]

**Nurse Triage Wait Time**

- [20-50] days

**Medication Efficacy**

- [3-4] days to [3-months]

---
### Proximal Effects

#### Wait Time for a Psychiatrist

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<tr>
<td>Time Med. Providers on Psychotropic</td>
<td>5.2%</td>
<td>7.7%</td>
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<td>2.0%</td>
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<td>(28)</td>
<td>(28)</td>
<td>(10)</td>
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#### DISPARITY/OUTCOMES (Flat Enroll.)

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<th>Campus Unmet Need (HealthyMinds)</th>
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<tr>
<td>Visits Unmet Need (Service Requests)</td>
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<tr>
<td>Counseling Wait Times</td>
<td>3days-2weeks</td>
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<tr>
<td>Nurse Triage Wait Time &gt; 10 min</td>
<td>20-35%</td>
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<tr>
<td>Psychiatrist Visit for Eval/Medication</td>
<td>1-2 months</td>
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<tr>
<td>Medical Total Visit (11-1pm Avg.)</td>
<td>53.6 minutes (Standard Deviation = 7.4 minutes)</td>
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</table>

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**7 months**

Wait Time for a Psychiatrist
Why Real Psychiatry is Critical

Figure 1. Suicide rate multipliers for SSRIs, SNRIs, and TCAs relative to antidepressants
Yet - Resource Investment is Behind

- In 2010, 38,364 people in the United States died by suicide. 1 about every 13.7 minutes in the US.
- In 2010, there were 33,687 motor vehicle deaths.

Chart Source: Kay Jamison “Night Falls Fast: Understanding Suicide”
• From 1981-2000 approx. 1 million died by suicide. 500,000 for HIV/AIDS related diseases.
DENIAL: Data (more) needed, no/common problem, benchmarking ratios. “We already have X therapists… we already spend Y dollars”

ANGER: Blame - faculty, staff, administration, counseling, admissions. “The university needs to change who we’re recruiting…”

BARGAINING: Creativity: new synergy, tiny-pieces/silver-bullet, external messiah “Have we tried…?” “U. of Florida bills for…” “Volunteers could…”

DEPRESSION: Later we’ll know more. Too big/unsolvable; many other issues. “Let’s look at this over the next 3 years.” “Change x and see”

ACCEPTANCE: Understanding. Resource existing service models / trust experts. “We will (better) serve the students we have, where we are.”

Mistler’s 5 Stages of Need-Capacity Gap Grief
Let’s say you have:

1700 students with untreated mental health

Treating 100 prevents 6.48 dropouts
If we can treat 1000 of the 1700 = 64 students (conservatively)

If we treated ALL 1700 it would be 110

HealthyMinds
Here’s what we know:

1. A large number of students are anxious, depressed, and suicidal, and for years have faced barriers to treatment including being underinsured (a significantly higher proportion compared to national benchmarks).

2. Insufficient campus & community resources exist to meet the need.

3. The gap between students’ health needs and campus capacity is measurable, significant, and can be remedied with the right multidisciplinary expertise and a sufficiently sized health and counseling staff.

4. A large proportion of students who leave could be retained each year by addressing their untreated mental health problems.

Our moral responsibility to help student success through overcoming health barriers to graduation aligns with our fiduciary responsibility to optimal ROI investment at our institutions.
Demand, Utilization, & Capacity for Mental Health, other Basic Needs, and Its Connection to Retention
Brian.Mistler@humboldt.edu

- Steadily increasing demand and cost for integrated mental health services
- Our moral responsibility to help student success through overcoming health barriers to graduation aligns with our fiduciary responsibility to optimal ROI investment at our institutions.
- Focus assessment on Demand, Utilization and Capacity (“DUC-DOVE method”)
  - Therapist-to-Student Ratios neglect campus cultures and multidisciplinary teams
  - Understand optimal resource allocation and examine ROI across student services
- Save the National Suicide Prevention Lifeline number (800-273-8255) in your phone.
- Focus new resources to:
  Improve physical/mental integration
  Increase access to psychiatry
  Improve training in four key areas
    A) Assessment
    B) Gatekeeper
    C) Implicit bias
    D) Engagement with changing national best practices
- Measure and close the Need-Capacity Gap for Therapists & others
- Robust, targeted health education w/ peer component

wellbeing.humboldt.edu/data | drmistler.com/resources
THE THREE STEP THEORY (3ST) OF SUICIDE FOR CAMPUSES

The goal of suicide gatekeeper prevention is to provide non-clinicians a broad understanding -- both emotional and intellectual -- of the risk factors for death by suicide as well as appropriate techniques and resources for referrals. Whatever gatekeeper program you’re using, in other sections you likely have or will soon discuss the emotional components of expressing care, asking the right questions, and connecting people with the right resources, as well as preparing your campus to respond following a suicide death (postvention).

This section is intended to introduce non-clinicians to a very basic overview of suicide theory, guided by the principle that one of the core questions almost every reasonable person asks in discussing suicide is “why do people die by suicide”, and that having a basic concept of the “why” that separates ideation from action is integral to supporting early risk detection and effective intervention. A discussion of the Three Step Theory (3ST) of suicide also provides an opportunity to deconstruct myths around suicide, including those which are overly simplistic (i.e. suicide is all about depression) or which fail to account for the role of capability, support resources, or protective factors.

Trainers with additional breadth of understanding regarding suicide research are invited to add additional information consistent with the model presented. However, caution should be taken to keep the focus on building a mental map for the purpose of helping reduce risk. Purely intellectual debates can be tabled for a future discussion. It should also be emphasized that the information presented herein does not constitute comprehensive training on suicide assessment -- for which clinicians train many years -- and participants should continue to make appropriate referrals.

Objectives:
- Understanding the Three-Step Theory (3ST) of Suicide including its content and rationale.
- Participant reflection on how 3ST pathways -- pain, hopelessness, connection, and capability for suicide -- can provide insight into identifying college students at risk of death by suicide.
- Awareness of how to use the 3ST pathways to identify points of intervention for reducing suicide risk by reducing pain, increasing hope, improving connectedness, and reducing capability.

Recommended Time:

30-40 minutes

This version was most recently updated 1/8/2018 and is still in draft; for the most updated copy please contact brian.mistler@gmail.com
THE THREE STEP THEORY (3ST) OF SUICIDE FOR CAMPUSES

I. Introducing the utility of understanding “why”

Trainer Instructions:

“Most of you are not therapists or researchers in “suicidology” -- the professional field dedicated to understanding why individuals die by suicide and how to reduce the risk. We talk a lot about the importance of connecting with an individual’s emotional experience rather than jumping to problem solving or over-intellectualizing. Given that, the fact we’re about to spend some time talking about a theoretical model of suicide risk may seem strange. But, as Kurt Lewin, the founding father of social psychology famously said, “There's nothing so practical as good theory”. And, indeed, even as a non-clinician there are some good reasons why understanding some basic principles of a key model of suicide will be helpful to you - what might be some of this reasons?.”

Trainers should allow a moment for participants to respond, sharing their reasons. Common reasons include being able to better recognize warning signs and being able to help more quickly or more efficiently, which should be addressed if not provided by participants.

“At the core, we ask ourselves why do people feel suicidal and make suicide attempts? If you do not have a good answer to this question, it can be difficult to understand and help those with suicidal thoughts. The Three-Step Theory (3ST) we will spend the next few minutes discussing provides an answer that is concise, easy to understand, and easy to apply in conversations with others.”

II. Three-Step Theory (3ST) content and rationale.

Step 1. Development of Suicidal Desire

“The first step toward suicidal desire begins with pain. Pain usually, but not necessarily, refers to psychological or emotional pain. Fundamentally, people are shaped by behavioral conditioning. We perform behaviors that are rewarded and avoid behaviors that are punished. Even from an early age, if a child touches a hot stove, he learns

In the rest of your program participants have been or will be thinking about suicide largely in terms of the experience of the individual and the available resources. In this section you will help participants to develop a mental map or model of how key researchers in the field think about risk factors for suicide, and to use this model to understand where, how, and why certain interventions may be effective.

Some of your participants may find suicide awkward, intimidating, and confusing to talk about abstract concepts in this way about something so personal as suicide. Others may actually find this exercise the most engaging if they’ve been feeling out of their element with the more emotional pieces. Others still may have overly simplistic ideas (e.g., suicide is about depression, suicide is about attention) that are not helpful for helping others. Presenting an accurate, concise, and user-friendly model helps address these issues.

This section communicates the content and rationale of the Three Step Theory, and is thus necessarily more didactic. You may choose to let participants know that this section will be more explanatory, and that
quickly not to avoid doing so again. If someone’s
day-to-day experience of living is characterized by
pain, the person feels punished for trying to engage with
life. This may decrease the desire to live and, in turn,
initiate thoughts about suicide. It is intentional that the we
are not specifying the nature of the pain. Different
sources of pain can all lead to a decreased desire to live.
What are some different kinds of pain?"

Trainers should allow a moment for participants to
respond, sharing their ideas. Common reasons include
physical suffering, social isolation, feeling like a burden
on others, feeling bad about oneself, and numerous other
aversive thoughts, emotions, sensations, and experiences.
Fill any categories you see as important that may be been
missed by participants and help participants identify
common categories while avoiding talking to deeply about
specific examples.

“In clinical language, we talk about suicidal thoughts as
suicidal ideation. The first step toward suicidal ideation
begins with pain, regardless of its source. However, pain
alone is not sufficient to produce suicidal desire. If
someone living in pain has hope that the situation can
improve, this person will focus on obtaining a future
with diminished pain rather than on the possibility of
ending his or her life. For this reason, hopelessness is also
required for the development of suicidal desire. In
short, when someone’s day-to-day experience is
characterized by pain, and the person does not feel hope
that the pain will improve, he or she will consider
suicide. The combination of pain and hopelessness is
the biggest answer to the question ‘why does a person
develop suicidal thoughts?’

Step 2. When Does Suicidal Desire Become Strong?
“Next, we want to explore we do suicidal desires get
stronger. Most people who feel suicidal experience
suicidal thoughts occasionally or at modest levels.
However, a subset of these individuals develop strong and
persistent suicidal desire. In short, among those with pain
and hopelessness, suicidal desire escalates when pain
exceeds or overwhelms connectedness. What sorts of
things help you in your life to feel a sense of overall
connectedness?”

subsequent sections will be more
participatory and interactive.

If there are clinicians, faculty, or
others who are very familiar
with suicide theory, you can also
invite audience members to help
identify ways that this model
connects with others they’ve
been trained in. Be cautious --
those less at home with the
emotional content who may have been feeling anxiety and/or a
lack of competence in some of
the other sections may become
more vocal when the discussion
turns theoretical. Simply do your
best to relate individual’s points
to the model being presented,
encourage questions, and return
the focus to understanding this
model less as an absolute truth
and more for its utility in
helping.

[FIGURES - Figures are
provided for optional use and
trainers are encouraged to
either display them as power
points to allow animation or to
draw them one a whiteboard or
piece of paper rather than
sharing them as-is which could
be overwhelming or confusing;
between step 1 and 2 is usually a
good place to begin drawing
FIGURE 3ST-A “Model
Components Overview” and
FIGURE 3ST-B “Indeation
Flow Chart”]

Depending on the audience and
time allowed, this can be a good
place to discuss in more depth
Trainers should allow a moment for participants to respond, sharing their ideas. Common ideas include connection to other people, but be sure to discuss larger notions of one’s attachment to a job, project, role, interest, or any sense of perceived purpose or meaning that keeps one invested in living.

“Connectedness matters, because even if someone feels pain and hopelessness and considers suicide, the suicidal ideation will remain moderate with thoughts like ‘sometimes I think I might be better off dead’ rather than strong with thoughts like ‘I would kill myself if I had the chance’ as long as one’s connectedness to life is greater than one’s pain. Usually connectedness in a healthy individual is spread out over many things, so the loss of one connection can be tolerated. Some connections can be very helpful in protecting a person, and for you in talking with someone about reasons for getting help. However, if a person’s sense of connection is only sustained by a single person or idea, that itself may suggest the person could benefit from therapy or other assistance and highlight on unpredictable the situation is should that change. Does this make sense?”

Trainers should pause to ensure participants have processed the notion of connectedness.

“If the person’s connectedness is greater than the person’s pain, this individual may still have passive thoughts of suicide but will not progress to active desire for suicide. However, if both pain and hopelessness are present, and pain is so great as to exceed or overwhelm the person’s sense of connectedness, the desire to end one’s life becomes strong and active. It is of course true for many people that disruptions to connectedness can increase pain and/or hopelessness. Many of you may have heard of other risk factors for suicide. Things like specific psychiatric conditions such as depression or anxiety, negative states of mind like self-criticism, and difficult experiences are all highly relevant to suicidal ideation -- can you think of some ways that each of these things may affect pain, hopelessness, and/or connectedness?”

Give participants an opportunity to relate these examples and any other existing notions of risk factors to the concepts of pain, hopelessness, and connectedness. For situations in which there is hopelessness but pain, to demonstrate how these also do not lead to suicidal ideation.

Depending on the audience and time allowed, this can be a good place to provide examples of using connectedness to facilitate getting help -- i.e. the individual who is connected to their career goals, their religious ideals, or a person or pet in their life may be encouraged to get help through valuing that connection. Equally, it may be worth discussing examples of connectedness which put pressure on others, being sure to tailor your examples to the audience. Consider the example of a person who experiences daily pain and hopelessness, but is invested in or connected to his or her children. Whenever possible, discuss from both sides of whatever example you provide, validating both experiences, e.g. the parents and child’s perspective. You might also discuss the example of a person who tells his/her/their
Step 3. Progression from Suicidal Thoughts to Actions

“Once an individual has developed a desire to end his or her life, the next question is whether the person will act on that desire and make an attempt. This is a key question because most people with suicidal thoughts do not make a suicide attempt. The key determinant for suicidal ideation progressing to dangerous action is the individual’s capability for a suicide attempt. Let’s explore what we mean by capability. People are biologically and evolutionarily wired to avoid pain, injury, and death. That survival instinct was important for all our ancestors. It is therefore very difficult for people to attempt suicide, even in the presence of strong desire not to live anymore. So, how does this capability develop? We can think about three contributors to suicide capability: acquired, dispositional, and practical.”

“Acquired capability refers to an individual’s experience with and habituation to pain, fear, and death through exposure to life experiences such as physical abuse, nonsuicidal self-injury, the suicide of a family member or friend, combat training, or any other experience that subjects someone to painful and provocative events. Dispositional refers to relevant variables that are driven largely by genetic or biological factors, such as pain sensitivity or a harm avoidant temperament. For example, someone born with low pain sensitivity will have a higher capability to carry out a suicide attempt, whereas someone temperamentally disposed to harm avoidance will have a lower capacity. Practical refers to concrete factors that make a suicide attempt easier. There are many kinds of practical factors. For example, someone with both knowledge of and access to lethal means, such as a firearm, will be more able to act on suicidal thoughts than someone who lacks knowledge of and access to lethal means. Another example is anesthesiologists and other medical professionals whose suicide rates are elevated. Our theory suggests that suicide rates are elevated because these individuals have significant other that the relationship is the only thing keeping them alive -- discussing how to understand this as a source of connectedness, and also a signal the person should urgently get additional help.

[This is a good place to have completed drawing FIGURES 3ST-A and 3ST-B] as you finish discussing capability]

One key area that need not be addressed here but may come up is the mechanism for increased risk through suicide contagion following psychosocial or geographic proximity to others who have died by suicide. You can use this as a transition to talking about capability, and invite participants to discuss it further in the suicide postvention module.

Depending on the nature of the audience you may decide to spend more time focused on the individual or the campus-wide discussion. Common examples of helping reduce means for an individual can include holding a persons pills, buying a gun lock,
both extensive knowledge of how to end one’s life painlessly and easy access to the necessary drugs. Importantly, practical capability can increase very quickly. For example, if a student learns through a google search that one kind of painkiller can be more fatal in overdose, this person’s capability for suicide has just increased markedly. While we often do not have control over a persons acquired or dispositional capability, reducing practical capability which includes means restriction -- reducing access to tools for self-harm -- can be an important area to address both with the individual and as a campus. What might that look like?”

Give participants an opportunity to provide examples of both ways that they might help reduce means for an individual and discuss ways they can support campus-wide change.

moving them to a lower story-residence hall. This may also be a good place to address the different between therapy and immediate safety, and build understanding for the role of short-term hospitalization, as well as the reasons risk can return or even increase after a person leaves the hospital.

Helping participants, whatever their role, to identify ways that they can make or encourage decision makers to make the campus as a whole safer through means restriction can give people a clear sense of immediate action and help them begin to think of means restriction as one important piece with a specific person -- things like reducing access to high areas, free gun lock programs, reducing locations that can be used for hanging, adjusting how medications are dispensed, etc. It’s important to note that when an individual considers one means they often have considered others, and means restriction alone should never substitute for professional help.

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APPLYING THE THEORY TO INTERVENTIONS

Depending on how you have organized your gatekeeper program, you may decide to use this section in one of two ways.

1) If you have a dedicated module for role-play it is recommended to incorporate these or similar examples into the role-play cases, and to invite participants during the debrief after each role play to address how they understand the person needing help or why they might have chosen specific intervention, using the 3ST pathways (pain, hopelessness, connection, and capability for suicide) to understand suicide risk.

2) If you do not have a structured role-play planned the same day, it may be worth spending a few minutes on the following content to help individuals integrate their new framework for understanding suicide into thinking concretely about at least a few examples. These examples are designed to help people step back from a situation to understand it, and in that way should supplement and not replace role-plays that focus on empathic listening skills and techniques for connecting individuals to referrals, i.e. using the “Care, Ask, Connect”, CampusConnect, “Question, Persuade, Refer”, or another such approach.

III. Using the 3ST pathways (pain, hopelessness, connection, and capability for suicide) to understand suicide risk in college students.

Trainer Instructions:
“We have discussed some ways to understand how stressors common in college populations contribute to suicide risk. Let’s try applying all of this to some some examples.”

The trainer can read the examples directly or have a printed copy and select an audience member to read.

“Example 1. A new student feels alone
A new student on campus may arrive without friends, as well as without a set of activities to provide structure and direction. If the student struggles to connect with peers and campus activities, while believing that other students are having more success, suicide risk can be impacted in many ways. In what ways can we understand this person’s possible experiences through the pathways of pain, hopelessness, connection, or capability?”

The trainer should allow time for responses and encourage individuals to return to applying this framework if they deviated. If they’re not addressed, some key points includes: First, the experience of feeling

[If using figures, begin here with FIGURE 3ST-C to discuss the broad idea of conceptualizing desire for death and desire to live using the 3ST factors in aggregate, then draw FIGURE 3ST-D and fill it in while explaining it until it matches figure 3ST-E; instead of using the exact figures you are encouraged to use the same format for the three figures and map them out over time in ways that match the details of several of the role-plays you present]

It is useful to help participants view college student stressors and suicide risk through the lens of 3ST pathways. The following examples are meant to facilitate this aim. Two examples are provided to participants, and then the trainer leads participant discussion about three others. The trainer can
disconnected may be miserable or painful. Second, the student may have arrived full of hope, but may start to feel hopeless about fitting in at college (and beyond) the loner his struggles continue. Third, because the student has left behind old connections, and is struggling to make new ones, he is low on the important protective factor of connectedness. At the same time, as long as the student maintains hope that things can get better -- that there is still time to meet people, still new activities to try -- this student will not yet develop suicidal desire.

Failing an exam can have small or large impacts on the pathways we have discussed depending on context. If the exam is in subject outside one’s major, and if it is still possible to pass the class, there may not be much impact. However, if the exam is in the student’s major and threatens the ability to succeed in this major, risk factors may increase quickly. How might you understand this person’s possible experiences and risk factors through the pathways of pain, hopelessness, connection, or capability?”

As before, facilitate a discussion. The experience of failing can be painful. Perhaps even more importantly, the student’s hope not only for their college goals but for their career and life goals may feel threatened.

IV. Transition to the next section

“This discussion was intended to introduce non-clinicians to a very basic overview of suicide theory, guided by the principle that one of the core questions almost every reasonable person asks in discussing suicide is “why do people die by suicide”, and that having a basic concept of the “why” that separates ideation from action is integral to supporting early risk detection and effective intervention. Of course, what you have learned is just the surface, and mental health clinicians spend years training -- so, in addition to recognizing and reducing risk, it remains especially critical when you identify someone to make an appropriate referral. In other sections we will discuss how to communicate genuine Care, how to Ask directly about Suicide, and how to connect the person to trained resources with the best chance they will use them”.

If there’s time or it’s more appropriate, additional examples for participant discussion might include:
- Breakup with a romantic partner
- College withdraws financial aid
- Dispute with parents over appropriate major

also feel free to utilize additional examples she/he feel are relevant and useful.
The Three Step Theory (3ST) of Suicide Campus Gatekeeper Training Module

Figure 3ST-A: “Model Components Overview”

- **Desire for Death**
  - Psychological Pain
  - Hopelessness

- **Desire to Live**
  - Connectedness

- **Capability**

- **Support Resources**

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1) Are you in pain and hopeless?

- No Ideation
- Suicidal Desire

2) Does your pain exceed your connectedness?

- Modest Ideation
- Strong Desire

3) Do you have the capability to attempt suicide?

- Desire Only
- Suicide Attempt

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The Three Step Theory (3ST) of Suicide Campus Gatekeeper Training Module
Figure 3ST-C: “Live/Die Balance”

Desire for Death

Pain + Hopelessness

1 2 3 4 5 6 7 8 9 10

Desire to Live

Connectedness

1 2 3 4 5 6 7 8 9 10
The Three Step Theory (3ST) of Suicide Campus Gatekeeper Training Module

Figure 3ST-D: “Desire/Capability Graph to Draw”
POSTVENTION AND CONTAIGON REDUCTION

While the goal of suicide prevention training is to reduce the likelihood that a suicide attempt will occur, deaths including suicides still occur on and off campus.

When they do, how do we help the campus community respond in a way that reduces the chances of suicide contagion?

This section is intended to integrate the presentation of information with involving participants in sharing their ideas about ways in which the risk of suicide contagion may be reduced. Trainers will likely want to invite participants to respond or ask questions any point in time during the course of this section. Trainers should attempt to support participants who offer ideas or ask questions that suggest they are reflecting on the material (e.g. questions about how a practice could increase suicide contagion, or genuine questions about the tension between expressing care and reducing the likelihood of contagion).

Trainers should feel free to exercise freedom in regards to how much information is solicited from participants and how much is provided through instruction. However, to ensure that all workshop participants have a similar experience and receive all information, trainers should follow the general outline and ensure each best practice piece is addressed.

Objectives:

- Understanding of the concept of suicide contagion and evidence for its existence.
- Participant reflection on the possible practices likely to increase or decrease the likelihood of contagion.
- Awareness of the best practices for postvention contagion reduction.
- Reflection on key steps in postvention and discussion of adaptation and challenges relevant to stakeholder group and campus environment.

Recommended Time:

15-30 minutes
POSTVENTION AND CONTAGION REDUCTION

I. Introducing the concept of contagion

Trainer Instructions: “We have talked a lot about suicide prevention and of course the goal and hope of our training is that you will be better prepared to respond to someone who is experiencing thoughts of suicide and we will reduce the likelihood that a suicide attempt will occur. Of course we know that even with our enhanced efforts deaths, including suicides, still occur on and off campus. What are your reactions to that truth?”

II. The concept of suicide contagion and evidence

Trainer Instructions: “I would like for us to spend just a few minutes talking about how we as individuals and as a campus community will respond if this happens on our campus. One reason why this is so important is that we know from decades of data that when a suicide occurs, there is a risk that others are more likely to follow. This phenomenon is called suicide contagion. Suicide contagion results in groups of deaths clustered in time, location or other affinity, and often method.”

“One clear example occurred in Japan in April of 1986 when Japanese singer Okada Yukiko jumped out of a building and died at age 20. The Japanese media reported the case extensively and sensationa

Training should allow a moment for participants to reflect on this statistic. If comments or discussion naturally emerges ask follow-up questions, or prompt a discussion by asking:

“What about a publicized suicide like the one in Japan do you think makes it likely for subsequent suicide rates to increase?”

Participants have been learning about how to prevent suicide and are now reminded that with all we do and all we can do, death still occurs. Before transitioning into the data and guidelines for campus contagion reduction, it is important to give the participants a chance to share their reactions, which may include feelings of helplessness, anger, guilt, complicated grief, etc.

If there has been a recent suicide on yours or a nearby campus people are aware of, it may be important to spend more time talking about what people felt and witnessed when that happened.
III. Understanding Contagion and Affinity

**Trainer Instructions:** Begin this section by transitioning from the discussion to make the point that “The most basic danger of suicide contagion is that it makes suicide real. After hearing about a suicide those who are already at risk may develop a greater sense that suicide is a more real option. How we respond after a suicide is different in a number of important ways than asking individuals about their suicidal thoughts.”

Then, continue by asking for participant reflection:

“How do you think the rates in Japan increased especially among 20 year olds?”

After participant responses, make clear that:

“Contagion results in groups of deaths clustered in time, location or other affinity and often method. The more I identify with the individual who committed suicide because we have things in common the more I may be able to imagine suicide as a real option for myself. The affinity group can be one they identify with or would like to identify with. What sorts of affinity dimensions might arise for students at a college that suggest an increased risk of contagion?”

After participant responses, add: “We learned that asking about suicidal thoughts doesn't increase a person’s risk for suicide. There are other important reasons why hearing about the method of a celebrity suicide on TV or in the paper makes it more likely that others will die from suicide. Seeing a person who committed suicide receive attention might make those with depressed or suicidal thoughts who feel unnoticed believe that suicide is a successful way to get attention, especially if the suicide is glorified in some way. Even if they are not a celebrity in the traditional sense, when their name goes out across campus or at memorial events, they temporarily become one. As we have discussed there are reasons why suicide contagion results in groups of deaths clustered in time, location or other affinity and often method. Why might suicides using similar methods also increase?”

It is important to separate the glorification of suicide and discussion of methods and details from the act of asking “are you having thoughts of suicide?”. We want to ensure that training people about the dangers of contagion does not inhibit them from asking important questions to investigate a person’s risk.

The goal is to facilitate a discussion about affinity and how being at the same college presents affinity on a number of dimensions. By discussing age, location, collegiate identity, social class, and other given and possible commonalities it is clear to participants how college student suicides present an especially clear risk of contagion.

Here participants learn about the importance of not sharing details of methods or otherwise increasing perceived notoriety and begin to identify concrete distinctions between asking individuals about their suicidal thoughts and sharing details of a suicide death.
IV. Key Strategies for Reducing Contagion

Trainer Instructions: Transition to this section by validating participant statements about the importance of not discussing methods, and add: “In fact, not discussing specific methods and not reporting on individual suicides are among the guidelines offered by the World Health Organization and ethics boards of major associations of journalism to help reduce the likelihood of contagion. We want to prevent people from concluding suicide is a means for gaining approval, sympathy, or wide attention. Others include:

Use Language Carefully
- Avoid phrases like: "successful suicide" – instead, “suicide attempt” or “suicide death”. Minimize notifications to only necessary content and don't romanticize suicide; Don't condemn or sympathize with actual or imagined reasons for suicide;

Be Cautious with Memorialization
- Avoid large memorial services or vigils. Events should be limited to family and very close friends and may be best in the deceased home town. Eulogizing should not minimize the role of mental health problems in the individual's death and should separate the qualities and accomplishments of the deceased from their illness and suicide.

Suicide is Not a Solution
- Reports should not describe suicide as a choice or solution to any problem (such as bankruptcy or academic problems); don’t romanticize suicide or otherwise suggest suicide as a viable way out.

No Simple Cause
- Suicide is never caused by a single reason. Don't over-simplify the explanations for suicide; Suicide should not be reported as unexplainable or a "mystery"; The personal history of mental health or drug abuse record should be mentioned.

Attend to Survivors Privately
- The manner of presenting information should consider the surviving relatives and friends. Having been close to someone who died by suicide is itself a risk factor for suicide. The sorrow or guilt of the surviving relatives and friends should not be focused on in public, which may be a wrong signal that suicide can draw people's attention.

While participants may all be able to separate glorification and phrases like “successful suicide”, remind people that those who are depressed or otherwise at risk may be in a state of mind that puts them at greater risk. And, we cannot always know who in the audience or reading campus notifications may be at risk.

It may be important to discuss in more depth the emotional reactions if you are part of a campus that normally has memorial events for student deaths. Talk about how suicide deaths are different, and how though it goes against our instinct for compassion and "speaking well of the dead" these guidelines are important to help reduce the risk of further loss of life. If memorialization is unavoidable in your context, discuss strategies to manage the size and location of the event, brief all those who will speak, and ensure clergy consult guidelines offered by the Suicide Prevention Resource Center or others to minimize contagion.
Avoid Headlines & Photos
- Publishing the photo of the deceased may give the false impression to the vulnerable people that committing suicide can make them famous. Don't illustrate the suicide method or venue of suicide in graphic presentation. Avoid presenting suicide as a headline or sending special notices about suicide cases to wide audiences.

Provide Resources for Help
- Provide solutions, such as information of mental health, hotline numbers and the warning signs of suicidal behavior; Present examples of successful counseling; Provide Hotline numbers which help the surviving relatives and friends; Encourage people to share the message that "depression is a treatable illness" and make sure they know how to get help from themselves and others.

Trainees can begin to conclude this section, “And, having gone through this training you are now better prepared to ask about individuals suicidal thoughts, provide resources for help, and encourage students to connect with those resources appropriately”.

V. Debriefing

Trainers should allow sufficient time to process the information presented. Trainers should guide the discussion so that emphasis is placed on planning which is consistent with the group presented to – those responsible for notifying the campus may have a very different discussion about how to respond after a suicide than faculty or students. Note, that any group may become aware of impromptu memorials or plans for publicity that is counterproductive, and talking with participants about how they might use their personal power to help re-direct the good intentions those who have not been trained may be helpful. Give participants a chance to discuss fears and share strategies for approaching others. You may also support staff participants who wish to schedule additional postvention planning or create procedures for campus response.

VI. Transition to next section

Here again separate the glorification of suicide and discussion of methods and details from the act of asking “are you having thoughts of suicide”. We want to ensure that participants understand how to reduce contagion and feel comfortable asking important questions to investigate a person’s risk.
The DUC-DOVE Method
An Approach to Resource Requirements Analysis and Management

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[PUBLIC DRAFT - Last Updated 2017-10-01]

Overview of Concepts and Terms
The DUC-DOVE Method is so termed for its seven principal components, Demand, Utilization, and Capacity, as well as the key Disparities between these items and Outcomes that result from failing to resolve such disparities, how such current or potential outcomes align with a hierarchy of Values, and subsequently Executing the values-based strategic plan to achieve the desired outcomes. It also includes necessarily an analysis of the factors which produce or limit capacity (e.g. in services analysis, return on investment (ROI), staffing, facilities, knowledge, or other capacity limitations). The DUC-DOVE Method is one approach to capturing key factors necessary for resource requirements analysis, summary, and allocation of resources decisions especially in service-related fields.

Demand or “Demand for Services” summarizes some quantifiable measure of the requests for services. As utilization is naturally capped by both capacity and awareness of services, tracking changes in utilization alone is as a poor indicator of the true demand for services, and fairly meaningless predictor of potential future utilization should capacity or awareness be altered. In the case of health-service delivery where demand exceeds Population Demand Maximum or “Need” captures the total potential demand for services in a given population. For purposes of nonprofit service delivery and the analysis described herein aimed at tertiary intervention, need can be assumed to be externally determined an unmodified by services. However, these same principles can be used when engaging in primary and secondary prevention to understand population level changes. When using sampling plus projection to determine future need, if the need is assumed to be externally determined, unmodified by services, and occurring at a fixed percentage, the Population Demand Maximum in a given time period is then, of course, equal to:

\[(\text{total current population size}) \times (\text{population growth factor})\]
\[\times (\text{percentage of individuals with the need})\]

Modeling changes to the base-rate of the demand maximum in a population is simply a matter of reproducing this model recursively -- taking there to be some higher-order limiting factor and modeling the population demand maximum in one model as the demand in another; this beyond the scope of the current overview.

Utilization in its simplest form is the number of times a particular service is provided. Where multiple services are aggregated together, utilization should be expressed in roughly equivalent common units (e.g. number of visits). In this model utilization and demand are defined such that utilization can never exceed demand.

Capacity or “Reasonable Capacity” when charted/graphed in this model should capture “reasonable capacity” as a final conclusion, having properly accounted for capacity benchmarking and the desired amount of discretionary capacity, rather than “physical capacity maximum”. Utilization may slightly exceed capacity, especially for short periods of time. When utilization exceeds reasonable capacity, the risk of lower quality service including errors and poor customer service increase.

Physical Capacity Maximum is the absolute upper bounds of capacity, beyond which it’s impossible to further increase output. This level of performance is actually undesirable as a framework in most circumstances, though it can be estimated in controlled environments. As
reasonable capacity approaches Physical Capacity maximum for sustained periods of time, staff are likely to experience burn-out and error rates are likely to increase.

**Overage Percentage** can be calculated as the percentage of time Utilization of Services exceeds reasonable capacity.

**Capacity Benchmarking** across other similar environments has several advantage and disadvantages. All forms of capacity are inherently variable in any industry involving both humans and problems of varying complexity. For example, if we ask how long does it take to fix a computer problem and then try to calculate how many computer problems a given technician can address in a day, we’re stuck not knowing things like how difficult the computer problems will be or how quick a particular technician will be. To achieve a capacity measure that can be applied uniformly for making projections, we take an average as a starting point for both (e.g. the average problem is of x complexity and the average technician can address 2 of these problems in an hour). But, the average where -- how do we know if our average is reasonable or not? The largest advantage of capacity benchmarking is it helps to adjust reasonable per-provider capacity expectations if an entire team of providers is under-performing. As a caution, however, capacity benchmarking must also take into account context and any systematic influences on problem complexity or operation conditions -- a remote computer repair shop in the freezing conditions of Antarctica next to a military training base, might see a disproportionately high number of computers with all sorts of severe damage requiring a much higher average time that has to be addressed in more difficult conditions, than technicians in a computer repair shop in a mall that spend half their day quickly replacing batteries, and referring the most complicated problems to specialists six doors down.

**Discretionary Capacity Factors** are elements of capacity that can be used to adjust capacity by skipping or adding steps which are “nonessential” to the primary task. For example, the time it takes to repair a phone could be shortened or lengthened depending on if I clean the phone’s screen before returning it to the customer. Technicians may be able to repair 12 phones a day without cleaning each, but only 11 a day when they take the time to clean them before returning them to the customer. Perhaps they could do 13 a day if they skipped all pleasantries entirely in their interactions with customers and focused entirely on the technical aspects. However, we can quickly imagine the impact of both of these decisions on customer satisfaction and return business. As customer service expectations increase -- because of competition for services or the expectations of a client base -- discretionary capacity factors should be considered when determining reasonable capacity.

**Connected Capacity Impact Weights** are useful when multiple pieces of a team work together to establish capacity. For example, in a health setting, capacity is clearly related to the availability of providers (i.e. 4 doctors have more capacity than 3), as well as the team of personnel which work together to provide services -- nurses, medical assistance, medical records support personnel, administrators, and so on -- who each make an impact on capacity. A team with 10 doctors will clearly have more capacity than a team with 5 doctors. And, a team of 5 doctors and 3 nurses we would understand to have more capacity than a team of 5 doctors and no nurses. However, how can we aggregate capacity into a single number across a team -- how does the capacity of a six-person team of 4 doctors and 2 nurses compare to a six-person team of 3 doctors and 3 nurses? To address this complexity while still allowing a single aggregate total capacity, resources of varying types which contribute to overall capacity can assigned weighted value based on their proportional impact on the specific service being examined. Note well that this number does not capture in anyway the overall value of the role to the organization, the ideal balance of team composition (which is more of an art requiring domain and context specific expertise), or account for “catastrophic” minimum thresholds (e.g. a team of 8 nurses might be efficient but simply couldn’t function legally without a medical doctor, and 8 doctors would be unable to help patients if there weren’t medical assistants or medical records support staff in sufficient proportion to room patients and track them). But, will all of these things in place, connected capacity weights (e.g. assigning an MD a relative Connected Capacity Impact Weight of 8 and a Nurse 5, can help quantify total capacity for connected teams. These weights can be established through domain-specific expertise and refined empirically by looking at varying utilization over time as staffing models shift slightly.
**Disparity** is the gap (calculated as the arithmetic difference between two items) between any of our metrics for Demand, Utilization, and Capacity, and its these gaps that help point to future actions. Key disparities produce important information:

**Demand-Utilization/Demand-Capacity Disparity** is present when Demand significantly exceeds Utilization and/or Capacity. When Service Demand exceed Utilization, it generally because Capacity is limiting utilization, and suggests the following objective to resolve the disparity:

-> **Increase Capacity**

**Population Demand Maximum-Service Demand Disparity** is present when the identified need in the population exceed the demand for services. This is generally due to either insufficient marketing or a decision on the part of consumers or providers to self-limit further attempts to increase service demand due to capacity limitations, stigma, costs of services, or other barriers to service utilization. As capacity and marketing are increased, without any other inhibiting factors, service demand will approach population demand maximum asymptotically. To resolve this disparity:

-> **Increase Marketing**
-> **Decrease Barriers**

**Utilization-Capacity Disparity** is present when utilization exceed reasonable capacity. As this disparity increases the risk of lower quality service including errors and poor customer service increase. Capacity can either be increased to meet demand or marketing can be used/reduced to decrease demand.

-> **Increase Capacity**
-> **Decrease Marketing**

**Capacity-Utilization/Demand Disparity** is present when capacity greatly exceed demand for services or utilization of services, and indicates services are being underused and resources are being over-allocated. Some target Capacity-Utilization or Capacity-Demand Gaps may be created intentionally in cases where a wait time for services is less acceptable (i.e. urgent care or other health services, utility repair services), however in all cases a reasonable upper bound must be identified based on probabilities (e.g. even Emergency Rooms or 911 services can't be designed to handle certain uncommonly large events). Capacity-Demand Disparity is similar to Capacity-Utilization disparity, except even more conclusive. When Capacity exceed Demand for Services, it should be determined whether or not to increase marketing or decrease capacity. When Capacity exceeds Population Demand Maximum, Capacity should definitively be lowered.

-> **Decrease Capacity**
-> **Increase Marketing**

**Outcomes** are those impacts on the client which have a somewhat knowable mathematical relationship to the other factors (Demand, Utilization, Capacity, and Disparities). In service delivery these may include things like wait-times in days or weeks for appointments, average wait time in minutes or hours for a walk-in appointment, total length of a visit (if there are multiple resources required in succession to provider a service), or peak times where there is high variability in demand.

**Values** determine which outcomes are desirable, acceptable, or unacceptable, and in a limited resource model a hierarchy of values helps to determine what decisions to make when two outcomes come into conflict. This includes return on investment (ROI) from both a financial and institutional values perspective. While this model approaches values in the decision making phase, the most successful organizations will have clearly defined their values at the beginning, and used them to guide areas more critical for DUC-DOVE analysis.

**Summary**
By examining Demand, Utilization, and Capacity, as well as the key Disparities between these items and the Outcomes that result from failing to resolve such disparities, and an individual/group's/institution's hierarchy of Values, it is possible to determine whether to increase or decrease capacity, marketing, or to address other external barriers, as well as weighing the trade-offs in setting reasonable capacity. The final step is executing
objectives to change the situation using values-based strategic plan to achieve the desired outcomes. Through repeated collection of data on Demand, Utilization, and Capacity the effectiveness of the plan can be monitored iteratively. The DUC-DOVE Method is one approach to capturing key factors necessary for resource requirements analysis, summary, and budgeting or other allocation of resources decisions in service-related fields, and may be useful on its own or in conjunction with others (e.g. SWOT, Value-Proposition Analysis, Free-Market, Resource-Demand Flattening, etc.) as part of the strategic planning process.