Beyond Suicide Risk Assessment: Adopting a Comprehensive Solution to Rising Suicide Rates

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Goals:

• Understand how a comprehensive crisis response system supports suicide risk reduction

• Compare methods for identifying and addressing care gaps for high-risk populations

• Discuss the value of using analytics to track and monitor suicide risk

• Gain knowledge about one evidence based strategy to address suicide risk with patients

• Envision a workflow for tracking and measuring suicide risk-related data
Current State of Suicide Risk

Suicide is the 10th leading cause of death across the U.S.

The suicide rate is increasing nationally.

+33% between 1993 and 2017.

Firearms were the most common method of suicide and account for more than half of all suicide deaths.

For every suicide, 30 attempts.

47,173 Americans died by suicide in 2017

129 suicides per day, on average.

Men die by suicide 3.54X more often than women.

Source: American Foundation for Suicide Prevention [www.cdc.gov/vitalsigns/suicide]
What’s the Problem? Assessment Limitations

Within 1 month of a suicide attempt:
  • 63% of individuals had a healthcare visit (any type)
  • 44% of individuals had a mental health visit

Providers worry about liability:
  • Will I be blamed if I ask and something happens to the patient?
  • I don’t have enough resources to support patient needs

Assessment protocols are not standard across organizations and not practiced consistently across providers

Lack of Awareness as to Critical Risk Windows
Critical Risk Assessment Windows

- Week after ED visit for substance abuse
- Week after psychiatric hospitalization (week after discharge)
- First weeks after starting an antidepressant

Qin P et al 2005; Olfson M et al 2014
What’s the Problem? Treatment Barriers

- Limited care options
  - Patients are often either hospitalized or sent home
- Emergency Room is Built for Quick Triage
- Beyond Safety Contracts → Safety Planning Discussions
- Gaps in dissemination of current research findings and best practices
- Diffusion of Solution – It Takes a Village
What’s Another Problem? Stigma

• Stigma continues to be a barrier to treatment

• Fear of stigma keeps people from seeking assistance (suffering in silence)

• Dutch Study* of regions with high and low suicide rates:
  • Higher suicide rates in areas with higher “population level stigma”
  • Stigma (shame) inversely correlated with help-seeking behavior rates
    (high stigma → low help-seeking → higher suicide rates)

• Reducing shame/stigma essential component of successful suicide prevention programs (USAF 33% 7 yrs, UCSD)

*Reynders et al 2014
Suicide Prevention as a Quality Improvement Initiative
Suicide Can Be Prevented!

• When someone dies by suicide how many times do we hear:
  • “he fell through the cracks”
  • “she had just been seen in primary care”

• Screening and care for mental illness is highly variable resulting in care gaps

• Need the same approach that we have for heart attack and stroke

• Need to reduce the irrational variation in care!
Suicide Prevention: Community & Organizational Commitment Needed!

- Actionable Strategies
  - Education: Mental Health, Suicide Prevention, Stigma Reduction
  - Interventions: CBT, ISP and others
  - Programs: Wellness Dimensions, Mentorship and more
  - Policy Changes: MH Therapy access and coverage
  - Cultural Changes: Address toxic behaviors, Promote safety and respect
Where Should Assessment and Prevention Strategies be Focused?

• Suicide is still a rare event and difficult to predict
  • What gap can assessment and consumer engagement protocols support?

• Across healthcare spectrum and stakeholder community
  • Outpatient Behavioral Health Care
  • Technology Based Consumer Engagement Strategies
  • Emergency Departments
  • Behavioral Health Inpatient Care
  • Primary Care
  • Public Safety
  • Government and Insurers
Regulatory Drivers for a Comprehensive Suicide Prevention Approach

Joint Commission for Hospital Accreditation
- *Central Event Alert 56* (published in 2016) which relates to the practice recommendations of assessing, safety planning, referring, etc
- 2017: 13 recommendations published specific to inpatient units in both psychiatric and general acute care hospitals, as well as emergency departments.
- 2018: 3 additional recommendations published for non-hospital behavioral health care settings.

NCQA
- Depression Screening
- Follow Up visits

CARF
- Has developed a standards manual supplement for comprehensive suicide prevention programs.
- Accreditation for your suicide program
- Suicide screening now required for all patients ≥ age 12.
Quality Improvement Elements of a Comprehensive Program

Many elements of a suicide reduction program represent standard best practices, including:

• High quality screening for depression / substance abuse
• Appropriate referral and paying attention to the handoff
• Stigma Reduction = Large component of an overall approach
• High quality treatment
  • Consumer Engagement
  • Monitoring adherence
  • Measuring response
  • Treating to target
Additional Success Elements

Implementing best practices outside of mental health settings
  • Emergency Department
  • Primary Care - Collaborative/Integrated care model

System wide awareness

Informatics support
  • Patient Engagement Technology
  • Provider Decision Support Tools, e.g., EMR reminders, risk alerts
  • Screening tools (PHQ-9; Columbia)

Population health analytics support
  • Identifying high risk populations
  • Measuring treatment response
  • Measuring quality of treatment
Using Data to Predict Risk
Using Data and Technology

• Identify Risk
• Identify Windows for Intervention
• Point to Best Care Actions
Using Data to Identify Risks

Common data tracked:
• Frequency of suicide assessment
• PHQ-9, question 9: Frequency of positive response; changes in severity

Other data that could suggest intervention/risk reduction:
• Opioid use
• Treatment adherence
• Alcohol and other substance use
• Medication management for SMI
• Demographics and epidemiology
• ED visits and hospitalizations
• Presence of comorbid conditions
• Social Isolation or other Social Stressors (SDOH)
Utilizing Predictive Modeling to Stratify Risk: VA Reach Vet

100+ Variables

- Demographics
- Prior Suicide Attempts
- Diagnoses
- VHA utilization
- Medications
- Interactions

No assessment data

Top 0.1% compared to general VA population

- Suicide (1 month) 33 X
- Suicide (1 year) 15 X
- Suicide attempt (1 year) 81 X

Utilizing Predictive Modeling to Stratify Risk: VA Reach Vet

Reach Vet Coordinator
- Receives notification
- Communicates with provider
- Tracks outreach

Providers
- Receive notifications about a high-risk veteran
- Re-evaluate care
- Consider treatment enhancement strategies
- Outreach to the veteran
Mental Health Research Network (MHRN)* Suicide Risk Calculator Project

Settings
• 7 health systems (HealthPartners, Henry Ford, KP Colorado, KP Hawaii, KP Northwest, KP Southern California, KP Washington)
• 8 million members

Visit Cohorts
• Visit between 1/1/2009 and 6/30/2015
• Age 13 or older
• Specialty MH visit OR primary care visit with MH diagnosis
• 19.6 million visits for approx. 2.9 million people

Outcomes
• Encounter for probable self-inflicted injury/poisoning in 90 days
• Death by probable self-inflicted injury/poisoning in 90 days

*Gregory Simon, Kaiser Permanente Washington Health Research Institute
Suicidal behavior in 90 days: Top 15 predictors in MH specialty care

<table>
<thead>
<tr>
<th>SUICIDE ATTEMPT FOLLOWING MH VISIT (of 110 selected)</th>
<th>SUICIDE DEATH FOLLOWING MH VISIT (of 62 selected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression diagnosis in last 5 yrs.</td>
<td>Suicide Attempt in last year</td>
</tr>
<tr>
<td>Drug Abuse diagnosis in last 5 yrs.</td>
<td>Benzodiazepine Rx in last 3 mos.</td>
</tr>
<tr>
<td>PHQ9 Item 9 score = 3 in last year</td>
<td>Mental Health ER visit in last 3 mos.</td>
</tr>
<tr>
<td>Alcohol Use Disorder Dx in last 5 yrs.</td>
<td>2nd Gen Antipsychotic Rx in last 5 years</td>
</tr>
<tr>
<td>Mental health inpatient stay in last yr.</td>
<td>Mental Health inpatient stay in last 5 years</td>
</tr>
<tr>
<td>Benzodiazepine Rx In last 3 mos.</td>
<td>Mental Health inpatient stay in last 3 mos.</td>
</tr>
<tr>
<td>Suicide attempt in last 3 mos.</td>
<td>Mental Health inpatient stay in last year</td>
</tr>
<tr>
<td>Personality disorder diag. in last 5 yrs.</td>
<td>Alcohol Use Disorder Dx in last 5 years</td>
</tr>
<tr>
<td>Eating Disorder diagnosis in last 5 yrs.</td>
<td>Antidepressant Rx in last 3 mos.</td>
</tr>
<tr>
<td>Suicide Attempt in last year</td>
<td>PHQ9 Item 9 score = 3 with PHQ8 score</td>
</tr>
<tr>
<td>Mental Health ER visit in last 3 mos.</td>
<td>PHQ9 Item 9 score = 3 with Age</td>
</tr>
<tr>
<td>Self-inflicted laceration in last year</td>
<td>Depression Dx in last 5 yrs/ wotj Age</td>
</tr>
<tr>
<td>Suicide attempt in last 5 yrs.</td>
<td>Suic. Att. In last 5 yrs. With Charlson Score</td>
</tr>
<tr>
<td>Injury/poisoning diagnosis in last 3 mos.</td>
<td>PHQ9 Item 9 score = 2 with Age</td>
</tr>
<tr>
<td>Antidepressant Rx in last 3 mos.</td>
<td>Anxiety Dx in last 5 yrs. with Age</td>
</tr>
</tbody>
</table>
MRHN Suicide Risk Calculator Predictor

Approximately 150 indicators:

- Demographics (age, sex, race/ethnicity, neighborhood SES)
- Mental health and substance use diagnoses (current, recent, last 5 yrs)
- Mental health inpatient and emergency department utilization
- Psychiatric medication dispensing (current, recent, last 5 yrs)
- Co-occurring medical conditions (per Charlson index)
- PHQ8 and item 9 scores (current, recent, last 5 yrs)
**How does model perform?**

<table>
<thead>
<tr>
<th>% of Visits</th>
<th>Item 9 Score</th>
<th>Actual Risk</th>
<th>% of Attempts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5%</td>
<td>3</td>
<td>2.3%</td>
<td>20%</td>
</tr>
<tr>
<td>3.5%</td>
<td>2</td>
<td>1.4%</td>
<td>19%</td>
</tr>
<tr>
<td>11%</td>
<td>1</td>
<td>.72%</td>
<td>26%</td>
</tr>
<tr>
<td>83%</td>
<td>0</td>
<td>.19%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Excludes all those missing PHQ9!

<table>
<thead>
<tr>
<th>Percentile of Visits</th>
<th>Predicted Risk</th>
<th>Actual Risk</th>
<th>% of All Attempts</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;99.5th</td>
<td>13.0%</td>
<td>12.7%</td>
<td>10%</td>
</tr>
<tr>
<td>99th to 99.5th</td>
<td>8.5%</td>
<td>8.1%</td>
<td>6%</td>
</tr>
<tr>
<td>95th to 99th</td>
<td>4.1%</td>
<td>4.2%</td>
<td>27%</td>
</tr>
<tr>
<td>90th to 95th</td>
<td>1.9%</td>
<td>1.8%</td>
<td>15%</td>
</tr>
<tr>
<td>75th to 90th</td>
<td>0.9%</td>
<td>0.9%</td>
<td>21%</td>
</tr>
<tr>
<td>50th to 75th</td>
<td>0.3%</td>
<td>0.3%</td>
<td>13%</td>
</tr>
<tr>
<td>&lt;50th</td>
<td>0.1%</td>
<td>0.1%</td>
<td>8%</td>
</tr>
</tbody>
</table>

*Gregory Simon, Kaiser Permanente Washington Health Research Institute*
Practical uses for risk prediction scores: Windows for Intervention

During visits:
- Trigger completion of CSSRS (as we do now based on PHQ9 Item 9 response)
- Trigger creation/updating of safety plan (as we do now based on CSSRS score)

Between visits:
- Outreach for higher-risk patients who cancel or fail to attend scheduled visits
- Outreach for higher-risk patients without follow-up scheduled within recommended interval

Intervention costs about $100 per year per person served
Is This Worth It?

What about false positives?
• MHRN Suicide Attempt Risk score >95th percentile = 5%
• Risk score >99th percentile = 10%
• US has 140,000 deaths each year due to stroke
• We provide anticoagulation for CHADS2 stroke risk >2% in 1 year

What about cost?
• MHRN intervention costs about $100 per year
• Anticoagulation treatment can be > $1000 just for medication alone

5-10% risk in the ED for self-harm within 90 days
• Makes sense to provide more detailed assessment, develop safety plan, and refer for follow up
Any Update from the VA Risk Model Here?

Update slide or delete
Relias Risk Model: Opioids

Focus on the Top 10 Risk Factors Chart:

- Which risk factors contribute most within selected member population (138 members)?
Using Data Doesn’t Replace Clinicians

What machines do well*
- Remember
- Calculate
- Behave Consistently

What people do well*
- Engage
- Communicate
- Understand

Data augments what clinicians know to help them get better at identifying and addressing suicide risk.

*Gregory Simon, Kaiser Permanente Washington Health Research Institute
Suicide Prevention Strategies
Strategies for Addressing a Comprehensive Approach

- Stigma Reduction
- Community Based Means Reduction
- Resilience Training
- Training and Education
- Use of Technology
- Consumer Engagement
- Evidence-Based Practices
Stigma

We need a culture where everyone knows to be smart about mental health.
Mental Health First Aid

Good to talk about it here
Suicide is a Complex and Diffuse Problem

Limiting Access to Means

- CO sensors in cars
- Barriers on bridges
- Blister packaging for medication
- Firearms
Building Resilience

• Coping Skills
• Problem Solving
• Stress Management
• Cultural/Religious Beliefs
• Community Connectedness/Reduce Isolation
• Positive Attitude to Mental Health Treatment/Support

What drains your reservoir?
What fills it up?

Therapy
Social Connection
Processing Conflict
Affirmation
Sleep & Exercise

Humiliation
Sleep Deprivation
Rejection
Loss
Triggers for Past Trauma
Consumer Engagement—New Promising Tools

- Apps
- RAFT (Reconnecting AFter a suicide attempt)
- Informative websites
- Web-based self-help interventions
- e-therapy interventions
- Chat websites
- Internet forums on suicide and suicide prevention
- Social networking websites on suicide prevention
Training & Education

Should include:
  • Risk Factors Awareness
  • Completing full risk assessment
  • Safety planning and lethal means reduction
  • Evidence Based Interventions
  • Referrals and Community Resources

Who should be trained?
  • Frontline staff (reception, billing, scheduling)
  • Direct care professionals (clinicians, physicians, MAs, nurses)
  • Organizational leadership (managers, directors, c-suite)
  • Ancillary Stakeholders (Police, schools, clergy)
Relias Clinical Simulations-Best Practice Training
“Are Healthcare Professionals Ready to Address Patients’ Substance Use and Mental Health Disorders?” by Glenn Albright, Ph.D., co-founder and director of research at Kognito, and Deborah S. Finnell, DNS, CARN-AP, FAAN, faculty consultant at Johns Hopkins School of Nursing

Reported in Open Minds New Report, May 2019

676 clinicians surveyed from 50 agencies.

- > 80% of them indicate they would likely be required to engage in brief screening and intervention.
- >50% felt ill prepared to conduct screening for SUD or BH risk.
- >60% felt ill prepared to engage in motivational interviewing.
- >60% felt ill prepared to develop an action plan with the consumer.
- Standard curricula doesn’t prepare clinicians for brief screening and intervention.
In-Session Simulation: Suicide Screening & Intervention for Adults

Why this is important for Relias...

• High-risk topic for clinicians
• Today, clinicians are not able to practice these skills until a client presents with suicidal ideation
• Provides training on how to assess, how to intervene, and what to do
• Goes beyond simple CEs: puts knowledge into practice in a safe, simulated environment
  • Top mentioned request in market survey in 2018 – how to apply knowledge to practice
  • Professional development/CE/clinical skill-building are in the top 25% of courses of courses taken
In Session: Suicide Screening & Intervention for Adults

How do we accomplish this?

• Course with branching scenarios.

• Two client scenarios that will be live actors.

• Will have 3 ‘voices’: the learner/therapist text on screen, the client(s), the supervisor (feedback provided based on learner responses).
Relias collects 2018 Engage Award for 'Best Use of Training' on behalf of the Zero Suicide Alliance

Relias was proud to represent the Zero Suicide Alliance (ZSA) at the Engage Awards ceremony in central London on Monday 12th November. The ZSA was announced winner of ‘Best Use of Training’ recognizing the ZSA’s achievement in delivering outstanding suicide prevention training which Relias custom-built in partnership with mental health experts at Mersey Care NHS Foundation Trust.
Recommended Standard Care for People with Suicide Risk:
MAKING HEALTH CARE SUICIDE SAFE
Suicide Risk-Reducing Therapy

• Dialectic Behavioral Therapy DBT (Linehan 2006)

• Cognitive Behavioral Therapy CBT (Beck, Brown 2005; Bryant, Rudd 2007; Holloway)

• CBT for Adolescent Attempters TASA (Brent 2009)

• Collaborative Assessment & Management of Suicidality (Jobes, Comtois)

• Attachment Based Family Treatment ABFT (Diamond)

• Attempted Suicide Short Intervention Program (Michel, Gysin-Maillart)
Medications

Maximize management of primary condition(s)

Suicide specific considerations

• Lithium for mood disorders (Baldessarini 2003, 2006)
• Clozapine for schizophrenia, only FDA with suicide indication (Meltzer 2003)

Antidepressants

• Pharmaco-epidemiologic study (Gibbons, Mann 2006)
• Counties with higher antidepressant prescription – lower suicide rate
• Monitor closely in youth <24

NMDA antagonists/partial agonists

• FDA “Breakthrough Therapy” designation
• Ketamine and Esketamine
THANK YOU

AnalyticsSolutions@Relias.com