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

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Relias

VISIONARY VOICES

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 leading cause of death across the U.S. **10th**

2nd leading cause of death among 15-34 year olds.

The suicide rate is increasing nationally.

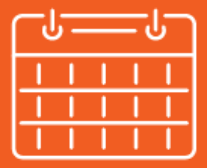
+27%

between 2000 and 2015.

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

For every suicide, **25** attempt.

Since 1993, the suicide rate in **North Carolina** has increased **almost 13%**



123 suicides per day, on average.

Men die by suicide **3.53x** more often than **women.**

Source: American Foundation for Suicide Prevention

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

American Foundation for Suicide Prevention

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

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

Identifying Risks Using Data

- 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

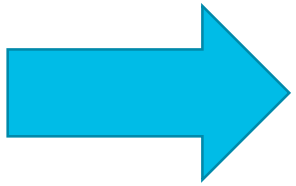
- Top 0.1% compared to general VA population
  - Suicide (1 month) 33 X
  - Suicide (1 year) 15 X
  - Suicide attempt (1 year) 81 X

McCarthy, J. F., Bossarte, R. M., et al. (2015). "Predictive Modeling and Concentration of the Risk of Suicide: Implications for Preventive Interventions in the US Department of Veterans Affairs." Am J Public Health 105(9): 1935-1942.

Reach Vet Enhanced Care

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 90days
  - Death by probable self-inflicted injury/poisoning in 90 day

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*Gregory Simon, Kaiser Permanente Washington Health Research Institute

Suicidal behavior in 90 days:
Top 15 predictors in MH specialty care

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

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Source: Gregory Simon, Kaiser Permanente Washington Health Research Institute, Mental Health Research Network presentation

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?

% of Visits	Item 9 Score	Actual Risk	% of Attempts
2.5%	3	2.3%	20%
3.5%	2	1.4%	19%
11%	1	.72%	26%
83%	0	.19%	35%

Excludes all those missing PHQ9!

Percentile of Visits	Predicted Risk	Actual Risk	% of All Attempts
>99.5th	13.0%	12.7%	10%
99th to 99.5th	8.5%	8.1%	6%
95th to 99th	4.1%	4.2%	27%
90th to 95th	1.9%	1.8%	15%
75th to 90th	0.9%	0.9%	21%
50th to 75th	0.3%	0.3%	13%
<50th	0.1%	0.1%	8%

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*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

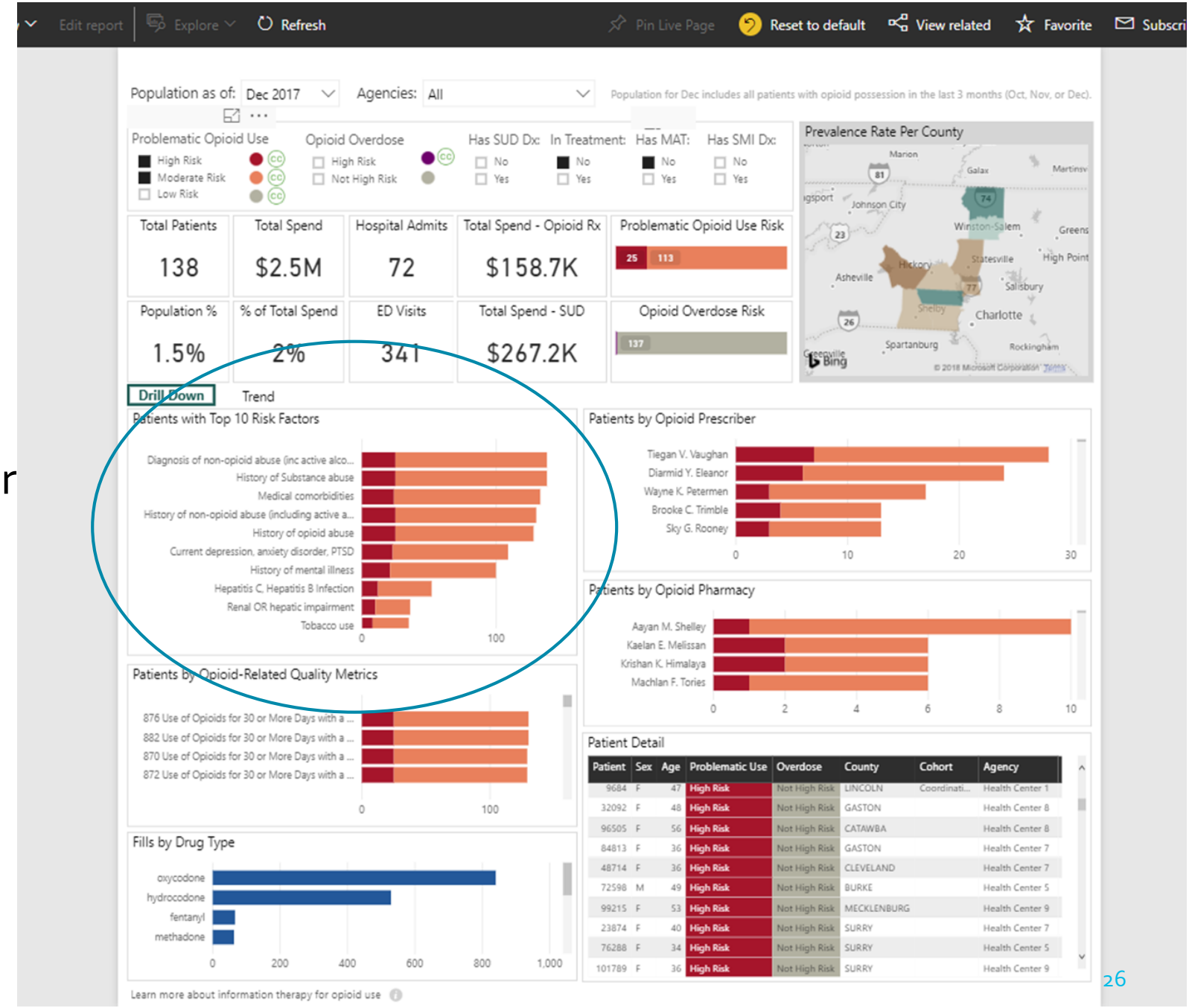
Is This Worth It?

- 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

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
- Understand
- Communicate

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

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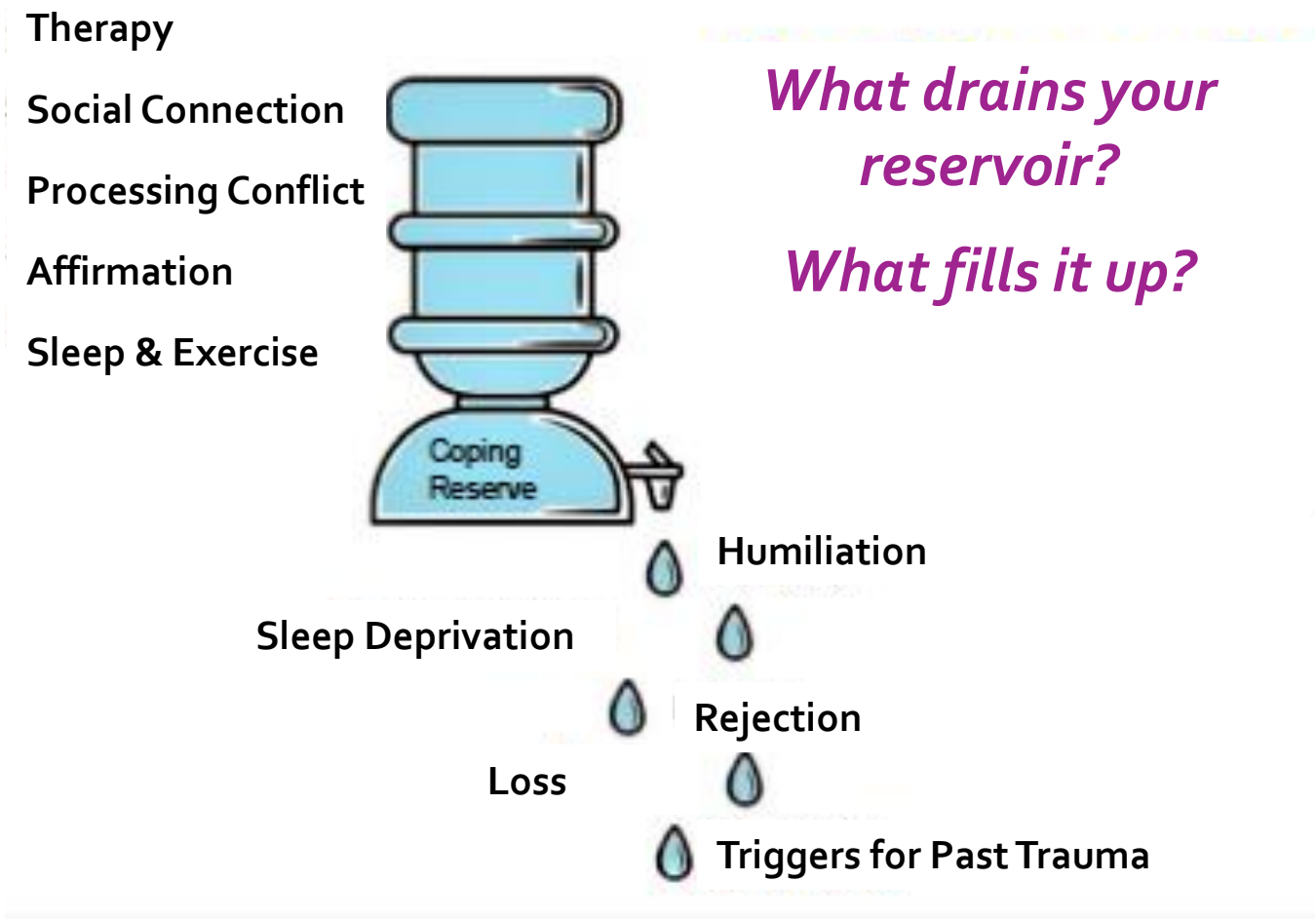
Suicide is a Complex and Diffuse Problem

- Limiting Access to Means

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?

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 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.

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Recommended Standard Care
for People with Suicide Risk:
MAKING HEALTH CARE SUICIDE SAFE
NATIONAL ACTION ALLIANCE
FOR SUICIDE PREVENTION

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
- On the horizon – NMDA antagonists/partial
  - FDA "Breakthrough Therapy" designation

Small Group Breakouts

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Thank You!

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