Screening and Managing Suicide Risk in Medical Settings: Turning Research into Practice

Lisa M. Horowitz, PhD, MPH
Intramural Research Program
National Institute of Mental Health, NIH
Bethesda, Maryland

December 10th, 2020
Project ECHO
University of New Mexico School of Medicine
The views expressed in this presentation do not necessarily represent the views of the NIH, DHHS, or any other government agency or official. We have no financial conflicts to disclose.
Learning Objectives

• Review a brief epidemiology of suicide
  – Medical setting

• Discuss the development and study of a population-specific and site-specific validated screening instrument - ASQ
Take Home Messages

• Universal suicide risk screening for all patients in medical settings: **Ask directly**

• Clinicians require **population**-specific and **site**-specific **validated** screening instruments

• Clinical Pathway- 3-tiered system
  – Brief Screen (20 seconds)
  – Brief Suicide Safety Assessment (~10 minutes)
  – Full Psychiatric/Safety Evaluation (30 minutes)

• **Discharge all patients with safety plan, resources (National Suicide Lifeline and Crisis Text Line), and means restriction education**
Robin Williams 1951 – 2014

Anthony Bourdain 1956 – 2018

Kate Spade 1962 – 2018

Kelly Catlin 1995 – 2019

Sydney Aiello 1999 – 2019

Calvin Desir 2002 – 2019
132 every day in the US, including 18 youth (10-24y)

CDC, 2018
Suicide

• International public health problem
• United States 2018:
  – 10th leading cause of death for all ages
  – 2nd leading cause of death for youth (10-24yrs)
Suicide rates among males by age group – United States, 1999 and 2017

<table>
<thead>
<tr>
<th>Age group</th>
<th>Rate per 100,000</th>
<th>1999 Rate</th>
<th>2017 Rate</th>
<th>Change</th>
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<tbody>
<tr>
<td>10-14</td>
<td>77.3%</td>
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<td>15-19</td>
<td>37.5%</td>
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<td>20-24</td>
<td>30.6%</td>
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<td>25-44</td>
<td>44.7%</td>
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<td>45-64</td>
<td>27.3%</td>
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<td>65-74</td>
<td>6.4%</td>
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<td>75+</td>
<td>-9.2%</td>
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Slide courtesy of Dr. Deborah Stone, CDC
Suicide rates among females by age group -- United States, 1999 and 2017


Slide courtesy of Dr. Deborah Stone, CDC
Suicide rates by ethnicity and age group -- United States, 2013-2017


Slide courtesy of Dr. Deborah Stone, CDC
Suicide Among AI/AN – All Ages

- In 2018, 8\textsuperscript{th} leading cause of death for AI/AN
- Most stigmatized mental health-related problems reported by AI/AN communities.
  - HIV/AIDs
  - Suicide
  - Mental Illness
  - Sexual Assault
- 20\% (669/3428) of all U.S. based AI/AN deaths in the AI/AN population are by suicide
- 38\% (205/537) of all U.S. based AI/AN youth deaths are by suicide
- AI/AN die by suicide at higher rates than other racial/ethnic groups, especially true for youth.

CDC WISQARS, 2018
The Public Health Reality of Suicide

2018 US Leading Causes of Death Ages 10 to 24

- Accidents
- Suicide
- Homicide
- Malignant Neoplasms
- Heart Disease

< 25%
High Risk Factors

- Previous attempt
- Mental illness
- Symptoms of depression, anxiety, agitation, impulsivity
- Exposure to suicide of a relative, friend or peer
- Physical/sexual abuse history
- Drug or alcohol abuse
- Lack of mental health treatment
- Suicide ideation
- Over age 60 and male
- Between the ages of 15 and 24
- LGBTQ
- Neurodevelopmental disorders
- Isolation
- Hopelessness
- Medical illness
Suicide Warning Signs

These signs may mean someone is at risk for suicide. Risk is greater if a behavior is new or has increased and if it seems related to a painful event, loss, or change.

- Talking about wanting to die or to kill oneself.
- Looking for a way to kill oneself, such as searching online or buying a gun.
- Talking about feeling hopeless or having no reason to live.
- Talking about feeling trapped or in unbearable pain.
- Talking about being a burden to others.
- Increasing the use of alcohol or drugs.
- Acting anxious or agitated; behaving recklessly.
- Sleeping too little or too much.
- Withdrawing or feeling isolated.
- Showing rage or talking about seeking revenge.
- Displaying extreme mood swings.

Suicide Is Preventable.

Call the Lifeline at 1-800-273-TALK (8255).

With Help Comes Hope

http://suicidepreventionlifeline.org/App_Files/Media/PDF/NSPL_WalletCard.pdf
Can we save lives by screening for suicide risk in the medical setting?
Suicide in the Hospital Setting

- Hospital-based suicides are rare and devastating
  - Ranked as a top-five Sentinel Event reported to TJC
  - 25% of hospital suicides occur in non-behavioral health settings
Underdetection

- Majority of those who die by suicide have contact with a medical professional within 3 months of killing themselves
  - 72% of adults visited healthcare provider
  - 38% of adolescents had contact with a health care system within 4 weeks
  - 50% of youth had been to ED within 1 year
  - Frequently present with somatic complaints

Ahmedani, 2017; Pan, 2009; Rhodes, 2013; Blum, 1996
“I’m right there in the room and no one even acknowledges me.”
Screening vs. Assessment: What’s the difference?

• **Suicide Risk Screening**
  – Identify individuals at risk for suicide
  – Oral, paper/pencil, computer

• **Suicide Risk Assessment**
  – Comprehensive evaluation
  – Confirms risk
  – Estimates imminent risk of danger to patient
  – Guides next steps
What are valid questions that nurses/physicians can use to screen medical patients for suicide risk in the medical setting?
Ask Suicide-Screening Questions (ASQ)

• 3 pediatric EDs
  – Boston Children’s Hospital, Boston, MA
  – Children’s National Medical Center, Washington, D.C.
  – Nationwide Children’s Hospital, Columbus, OH

• September 2008 to January 2011

• 524 pediatric ED patients
  – 344 medical/surgical, 180 psychiatric
  – 57% female, 50% white, 53% privately insured
  – 10 to 21 years (mean=15.2 years; SD = 2.6y)

ASQ Study (cont’d)

• Administered 17 candidate items:
  – “Have you ever felt hopeless, like things would never get better?”
  – “Do you feel like you might as well give up because you can’t make things better for yourself?”

• Administered gold standard: Suicidal Ideation Questionnaire (SIQ; Reynolds, 1987)

• Examined the least number of items with sound psychometrics

• Positive responses received psychiatric consultation
Sensitivity: 96.9% (95% CI, 91.3-99.4)
Specificity: 87.6% (95% CI, 84.0-90.5)

Negative predictive values:
- Medical/surgical patients: 99.7% (95% CI, 98.2-99.9)
- Psychiatric patients: 96.9% (95% CI, 89.3-99.6)

Results

- 98/524 (18.7%) screened positive for suicide risk
  - 14/344 (4%) medical/surgical chief complaints
  - 84/180 (47%) psychiatric chief complaints

- Feasible
  - Less than 1 minute to administer
  - Non-disruptive to workflow

- Acceptable
  - Parents/guardians gave permission for screening
  - Over 95% of patients were in favor of screening

- ASQ is now available in the public domain
Validation and Implementations in Other Settings: Ongoing Research

- Inpatient medical/surgical unit
- Outpatient primary care/specialty clinics
- ASQ in adult medical patients
- Schools
- Child abuse clinics
- Detention Facilities
- Indian Health Service (IHS)
- ASD/NDD Population

Foreign languages
- Spanish
- Italian
- French
- Portuguese
- Dutch
- Arabic
- Somali
- Hindi
- Hebrew
- Vietnamese
- Mandarin
- Korean
- Japanese
- Russian
- Tagalog
- Urdu

ASQ Toolkit: www.nimh.nih.gov/ASQ
ASQ in Adults Validation Study

• 2019 data collection complete at all 4 sites
• Adult medical/surgical patients aged 18+ years
• Sample demographics (N = 727)
  – 53.4% male
  – 61.8% White
  – Mean age: 50.2 years

Horowitz, Snyder… & Pao (2020) Psychosomatics
ASQ in Adults Validation

Sensitivity: 100%
(95% CI, 90%-100%)

Specificity: 89%
(95% CI, 86%-91%)

Negative predictive values: 100%
(95% CI, 99%-100%)

Horowitz, Snyder… & Pao (2020) Psychosomatics
The ASQ Toolkit

Organized by medical setting:

- ASQ Tool
- Brief Suicide Safety Assessments
- Information Sheets
- Scripts for staff
- Flyers for guardians
- Patient resources list
- Educational videos

ASQ Toolkit: [www.nimh.nih.gov/ASQ](http://www.nimh.nih.gov/ASQ)
What happens when a patient screens positive?
What is Considered a Positive Screen?

- Any “yes” to #1-4
- Refuses to answer
- “Yes” to 1-4 = Q5: “Are you having thoughts of killing yourself right now?”

Two ways to screen positive:

- **Non-Acute:** answers “yes” to any of questions #1-4 or refuses to answer, and is “no” to Q#5
  - Provider conducts a brief suicide safety assessment (BSSA)
  - Patient is asked to stay until BSSA is completed, however, if parent refuses, this should be treated as an “AMA” (Against Medical Advice) discharge

- **Acute:** answers “yes” to #5: “Are you having thoughts of killing yourself right now?”
  - Very rare for non-behavioral health patients
  - Patient will need an emergent psychiatric evaluation
  - Does not require a BSSA because patient will need a full mental health evaluation
  - Patient should not be left alone

- Study data reveal that screening may result in one extra positive screen for risk of suicide per week
Universal Suicide Risk Screening
Clinical Pathway

Clinical Pathway- 3-tiered system

Brief Screen (~20 seconds)

Brief Suicide Safety Assessment (~10 mins)

Full mental health eval
or outpatient referral
or no further action required

Brief Suicide Safety Assessment

Praise patient for discussing their thoughts

Assess the patient

Interview patient and parent/guardian together

Determine disposition

Provide resources to all patients

<table>
<thead>
<tr>
<th>C-SSRS</th>
<th>BSSA</th>
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**ASQ BSSA**

**NIMH Toolkit\* Emergency Department**

**Brief Suicide Safety Assessment**

**1. Indicate by Yes or No**

- Have you ever thought of killing yourself?  
- If yes, ask: "When was the last time you thought of killing yourself?"

**2. Ask follow-up questions**

- How often? (Once a week, several times a year, more than once a week, more than once a month, etc.)
- How long? (Days, weeks, months, etc.)
- How long did it last? (If applicable)

**3. Ask for information about suicide plans**

- How would you kill yourself?  
- If yes, ask: "If you were planning to kill yourself, how would you do it?"

**4. Past behavior (strongest predictor of future attempts)**

- Have you ever attempted suicide before?  
- If yes, ask: "How did you attempt suicide?"

**5. Symptoms**

- Fatigue, anxiety, weight loss, substance abuse, withdrawal signs, depression, irritability, changes in sleep and appetite, loss of interest in usual activities.

**6. Support & Safety**

- Support network
- "I'm trained to help..."
- "How can I help you?"

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**Additional Resources**

- [National Suicide Prevention Lifeline](https://988.org)
- [Crisis Text Line](https://www.crisistextline.org)

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**NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH)"
What is the purpose of the BSSA?

- To help clinician make “next step” decision
- 4 Choices

  - **Imminent Risk**
    - Emergency psychiatric evaluation

  - **High Risk**
    - Further evaluation of risk is necessary

  - **Low Risk**
    - Not the “business of the day”
    - No further intervention is necessary at this time.
Indian Health Service

- IHS Quality Improvement Project
  - Consulting, training, and guiding a QIP implementation of suicide risk screening in American Indian/Alaska Native (AI/AN) pediatric and adult patients in IHS emergency departments
  - Piloting the ASQ in 2 emergency departments before system wide implementation to all 170 facilities.
    - Whiteriver Hospital, Whiteriver, Arizona

- Chinle - Validating the ASQ in Navajo in collaboration with Johns Hopkins University
COVID-19: YOUTH SUICIDE RISK SCREENING PATHWAY

**Medically able to answer questions?**

- **YES**
  - Administer ASQ (Ideally separate from parent/guardian)
  - Assess whether patient is a phone placebo
  - YES to ASQ?
    - YES to YES?
      - Make a safety plan with the patient and parent/guardian as needed
      - Schedule a follow-up with patient within 24 hours for safety check in to determine whether or not they were able to obtain a telephone or in-person mental health appointment
      - Assess need for ED visit or parent/guardian’s ability to manage patient safety at home
      - INSTRUCT PARENT/GUARDIAN TO INITIATE SAFETY PRECAUTIONS
        - Medical supervision in house to keep patient under direct observation at all times and remove or safely store dangerous items

- **NO**
  - Screen at next visit

- **NEGATIVE SCREEN**
  - BSSA
    - **LOW RISK**
      - No further action is needed at this time
      - Would benefit from a non-urgent mental health follow-up?
        - NO
          - No referral needed at this time
        - YES
          - REFERRAL
            - To further intake or case management appropriate to the patient’s needs
            - Schedule a follow up with patient within 24 hours for safety check in to determine whether or not they were able to obtain a telephone or in-person mental health appointment
            - Assess need for ED visit or parent/guardian’s ability to manage patient safety at home
            - INSTRUCT PARENT/GUARDIAN TO INITIATE SAFETY PRECAUTIONS
              - Medical supervision in house to keep patient under direct observation at all times and remove or safely store dangerous items

    - **FURTHER EVALUATION NEEDED**
      - Mental health referral needed as soon as possible via telehealth services or in person
      - Would benefit from a non-urgent mental health follow-up?
        - NO
          - No referral needed at this time
        - YES
          - REFERRAL
            - To further intake or case management appropriate to the patient’s needs
            - Schedule a follow up with patient within 24 hours for safety check in to determine whether or not they were able to obtain a telephone or in-person mental health appointment
            - Assess need for ED visit or parent/guardian’s ability to manage patient safety at home
            - INSTRUCT PARENT/GUARDIAN TO INITIATE SAFETY PRECAUTIONS
              - Medical supervision in house to keep patient under direct observation at all times and remove or safely store dangerous items

    - **IMMINENT RISK**
      - Patient has active suicidal thoughts and needs urgent full mental health evaluation
      - PARENT/GUARDIAN TO INITIATE SAFETY PRECAUTIONS
        - Medical supervision in house to keep patient under direct observation at all times and remove or safely store dangerous items

- **SAFETY PLANNING**
  - Collate safety plan with potential future suicidal thoughts, including identifying personal warning signs, preparing a strategy, social contacts for support and emergency contacts. Detailed instructions about safety planning can be found at https://www.nimh.nih.gov/health/topics/safety-planning/index.shtml
  - Obtain contact information of the patient and parent/guardian

If suicide risk becomes more acute, instruct patient/parent/guardian to contact outpatient healthcare provider to re-evaluate need for ED visit.

Schedule all patients who screen positive for a follow-up visit in 3 days to confirm safety and to determine if the mental health care connection has been made. Future follow-up primary care appointments should include re-screening patient, reviewing use of safety plan, and arranging connection with mental health clinician.

**www.nimh.nih.gov/asq**
# Safety Planning

## Patient Safety Plan Template

<table>
<thead>
<tr>
<th>Step 1: Warning signs (thoughts, images, mood, situation, behavior) that a crisis may be developing:</th>
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<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<tr>
<th>Step 2: Internal coping strategies – Things I can do to take my mind off my problems without contacting another person (relaxation technique, physical activity):</th>
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<td>2.</td>
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<thead>
<tr>
<th>Step 3: People and social settings that provide distraction:</th>
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<tbody>
<tr>
<td>1. Name                                                 Phone</td>
</tr>
<tr>
<td>2. Name                                                  Phone</td>
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<tr>
<td>3. Name                                                  Phone</td>
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</tbody>
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<tr>
<th>Step 4: People whom I can ask for help:</th>
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<tbody>
<tr>
<td>1. Name                                                  Phone</td>
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<tr>
<td>2. Name                                                  Phone</td>
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<tr>
<td>3. Name                                                  Phone</td>
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<tr>
<th>Step 5: Professionals or agencies I can contact during a crisis:</th>
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<tbody>
<tr>
<td>1. Clinician Name                                             Phone</td>
</tr>
<tr>
<td>Clinician Pager or Emergency Contact #</td>
</tr>
<tr>
<td>2. Clinician Name                                             Phone</td>
</tr>
<tr>
<td>Clinician Pager or Emergency Contact #</td>
</tr>
<tr>
<td>3. Local Urgent Care Services</td>
</tr>
<tr>
<td>Urgent Care Services Address</td>
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<tr>
<td>Urgent Care Services Phone</td>
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<tr>
<td>4. Suicide Prevention Lifeline Phone: 1-800-273-TALK (8255)</td>
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<th>Step 6: Making the environment safe:</th>
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- **Warning Signs**
- **Coping Strategies**
- **Social Contacts for Support**
- **Emergency Contacts**
- **Reduce Access to Lethal Means**

Lethal Means Safety
Resilience is not the absence of struggle…
It’s messy.

Does not mean immediately being okay.
Seven C’s of Resilience

• (1) Competence
• (2) Confidence
• (3) Connection
• (4) Character
• (5) Contribution
• (6) Coping
• (7) Control

Ginsburg & Jablow, 2015
How do we teach young people to handle the ups and downs of life?
Turning research into practice
ASQ Worldwide
Summary

• Medical setting is important venue to identify individuals at risk for suicide – **ask directly**

• Screening can take 20 seconds

• Requires practice guidelines for managing positive screens
  – Clinical Pathway- 3-tiered system
    • Brief screen (20 seconds)
    • BSSA (~10 minutes)
    • Full mental health/safety evaluation (30 minutes)

• Fostering resilience is critical and may be protective against suicide risk

• Counsel families on how to safely store or remove lethal means (firearms, pills, knives, ropes)
A patient example

- 18 y.o. male presenting with fatigue
- Nurse intuition – something not right
- Administered ASQ
Common concern from pediatricians:

“How am I going to manage the extra kids I’m going to identify that are at risk for suicide?”
Video courtesy of Anne Moss Rogers – Beacon Tree Foundation President

https://www.youtube.com/watch?v=QaPeu6s__YM&feature=youtu.be
Thank You!

Study teams and staff at

National Institute of Mental Health
Maryland Pao, MD
Deborah Snyder, MSW
Elizabeth Ballard, PhD
Audrey Thurm, PhD
Michael Schoenbaum, PhD
Jane Pearson, PhD
Susanna Sung, LCSW-C
Kalene DeHaut, LCSW
Kathleen Samiy, MFA
Jeanne Radcliffe, RN, MPH
Dan Powell, BA
Eliza Lanzillo, BA
Mary Tipton, BA
Annabelle Mournet, BA
Nathan Lowry, BA

Indian Health Service
Pamela End of Horn, MSW, LCSW
Sean Bennett, LCSW, BCD
Tamara James, PhD
Wendy Wisdom, MSW
Ryan Garcia, PMP
Skye Bass, LCSW

Nationwide Children’s Hospital
Jeffrey Bridge, PhD
John Campo, MD
Arielle Sheftall, PhD
Elizabeth Cannon, MA

Boston Children’s Hospital
Elizabeth Wharff, PhD
Fran Damian, MS, RN, NEA-BC
Laika Aguinaldo, PhD

Children’s National Medical Center
Martine Solages, MD
Paramjit Joshi, MD

Parkland Memorial Hospital
Kim Roaten, PhD
Celeste Johnson, DNP, APRN, PMH CNS
Carol North, MD, MPE

Pediatric & Adolescent Health Partners
Ted Abernathy, MD

Harvard Injury Control Research Center
Matthew Miller, MD, MPH, Sc.D.

Children’s Mercy
Kansas City
Shayla Sullivant, MD

PaCC Working Group
Khyati Brahmbhatt, MD
Brian Kurtz, MD
Khaled Afzal, MD
Lisa Giles, MD
Kyle Johnson, MD
Elizabeth Kowal, MD

Catholic University
Dave Jobes, PhD

Beacon Tree Foundation
Anne Moss Rogers

Thank you to the American Foundation for Suicide Prevention for supporting our ASQ Inpatient Study at CNMC

A special thank you to nursing staff, who are instrumental in suicide risk screening.

We would like to thank the patients and their families for their time and insight.
References

- Great Lakes Inter-Tribal Council, Inc. Suicidal Behaviors Among American Indian/Alaska Native Populations: Indian Health Service Resource Patient Management System Suicide Reporting Form Aggregate Database Analysis, 2003-2012 funded by the Indian Health Service, Division of Behavioral Health. Lac du Flambeau, WI: Great Lakes Inter-Tribal Epidemiology Center, Great Lakes Inter-Tribal Council, Inc.; 2013.
Any Questions?

Just asQ!  
horowitzl@mail.nih.gov