SCREENING LINKED TO CARE

REDUCING YOUTH SUICIDE IN MONTANA SCHOOLS

Rural Behavioral Health Institute

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Suicide Facts in the US and Montana

- 2nd leading cause of death ages 10-14, 25-34[1]
  - 2nd leading cause of death ages 10-44 in Montana
- 33% increase in US in past 10 years in ages 10-24[1]
  - 70% increase in Montana
- ~135 family members and friends affected per suicide.[3]

[1] https://wisqars.cdc.gov/fatal-reports
[2] https://wisqars.cdc.gov/cost/
[3] Cerel. Suicide Life Threat Behav. 2019

High Montana Youth Suicide Rate for adolescents aged 12-18 years

Suicide Rate (per 100K)

25
20
15
10
5
0

3.2x
2.6x
2.3x
2.4x
2.0x
2.0x

CO MT ND SD UT WY US

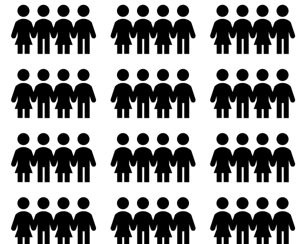
CDC WISQARS. 12-18 years. 2016-2020.

Levels of Youth Suicide Prevention Interventions

MORE

UNIVERSAL

All students

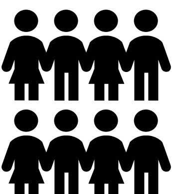


Non-mental health personnel

IMPROVE

TARGETED

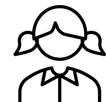
Students with risk

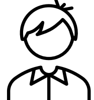


Mental health clinicians
and
Non-clinicians

SELECTED

Students with suicidality





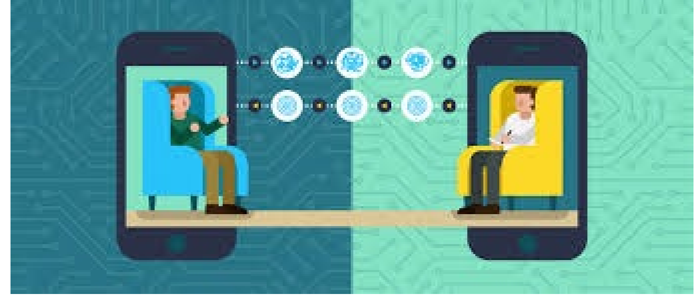
Specialists

EXPAND REACH

Universal School-based Screening Linked to Care To Prevent Suicide

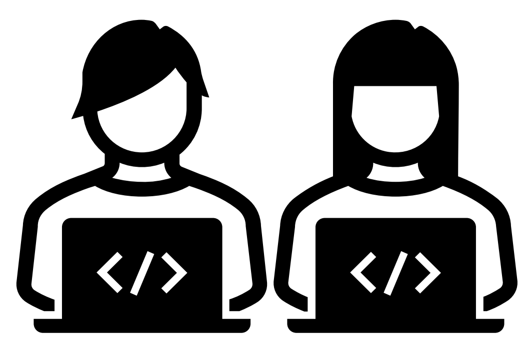
Access to all youth

Identify and Refer to Care



- Screening identifies youth who are at risk
- Increases mental health service use
- Earlier treatment = better outcomes

Screening Linked to Care Intervention



Digital delivery
Best suicide-risk predictor and
Depression and anxiety scales

+

Same-day, at school care
Clinician in school or
Telehealth partners

Connecting Youth to Care

Same-day care for those with high risk

Referral

REACTIVE

Web-based screening 5-8 minutes:

Results within 1 minute to school staff

Inform school programming

PROACTIVE

Adaptable Screening Platform

Suicide risk prediction

(eC-SSRS)

Depression symptoms

(PHQ-A)

SUICIDE RISK

Anxiety symptoms

(GAD-7)

Functioning or Resilience

(WSAS-Y/CD-RISC-10)

Montana SLTC Suicidality Data

Students Screened = **904**

- **Students with recent suicidality = 75 (8%)**
- Students with lifetime suicidality = **172 (19%)**

- Students with serious depression symptoms = **11%**
- Students with serious anxiety symptoms = **11%**

- EVERY SCREENING has identified ≥ 1 student not known to be experiencing serious mental health issues.

Data-driven Decision Making

Possible uses for screening data by schools:

- Follow students' health longitudinally
- Assess mental health programming
- Determine what mental health support is needed

Possible uses for screening data by the state:

- Determine mental health resources needed
- Identify districts in need of additional support
- Assess effect of mental health programming by school/district

Workforce Expansion

- Redistribute care (telecare)
- Incentivize current and future clinicians
- Increase quality of care by non-specialists
  - Mentoring model (e.g., Project ECHO at Billings Clinic)

Funding

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- Montana Department of Public Health and Human Services
- Morgan Stanley Children's Mental Health Alliance
- Accelerate the Future Foundation
- Individuals interested in supporting the wellbeing of Montana's children.

Disclaimer: This project is funded in whole or in part under a Contract with the Montana Department of Public Health and Human Services. The statements herein do not necessarily reflect the opinion of the Department.

Discussion?

If you'd like to try the screener or have questions, please send us an email:

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Julie Anderson: janderson@rbhi.org

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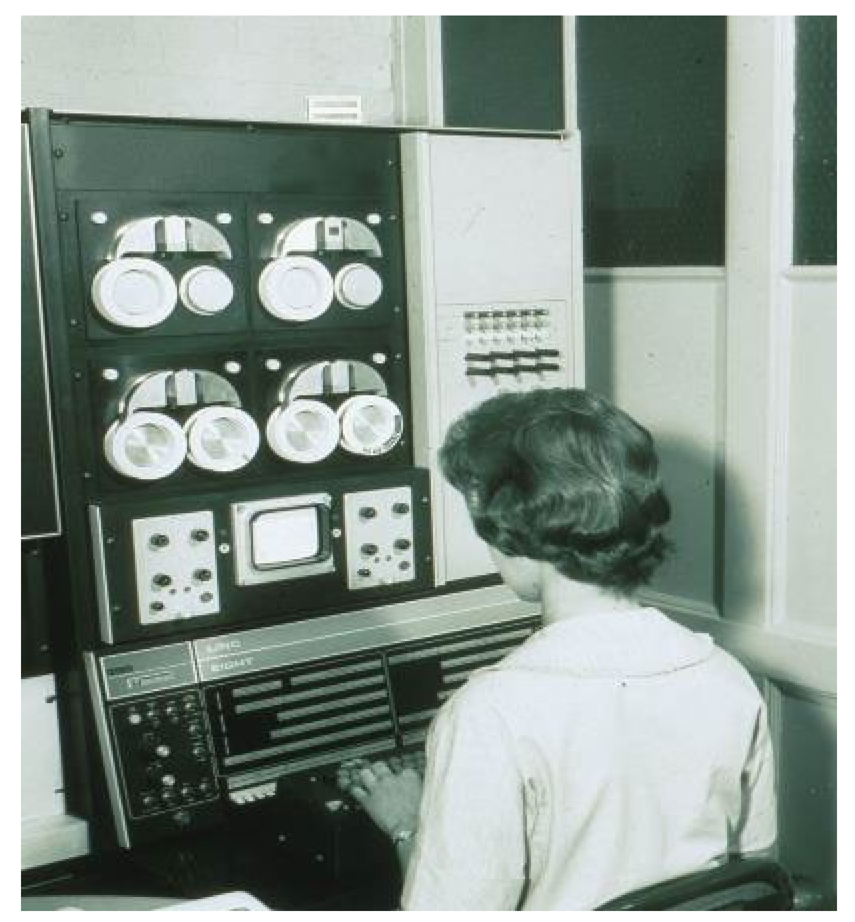


Computer-automated assessment of suicidality

Circa 1973

"Patients preferred the computer interview to talking to a physician … the computer was more accurate than clinicians in predicting suicide attempts."

A Computer Interview for Suicide-Risk Prediction

BY JOHN H. GREIST, M.D., DAVID H. GUSTAFSON, PH.D., FRED F. STAUSS, M.S., GLEN L. ROWSE, M.S., THOMAS P. LAUGHREN, M.D., AND JOHN A. CHILES, M.D.

Am J Psychiatry 130:12, December 1973

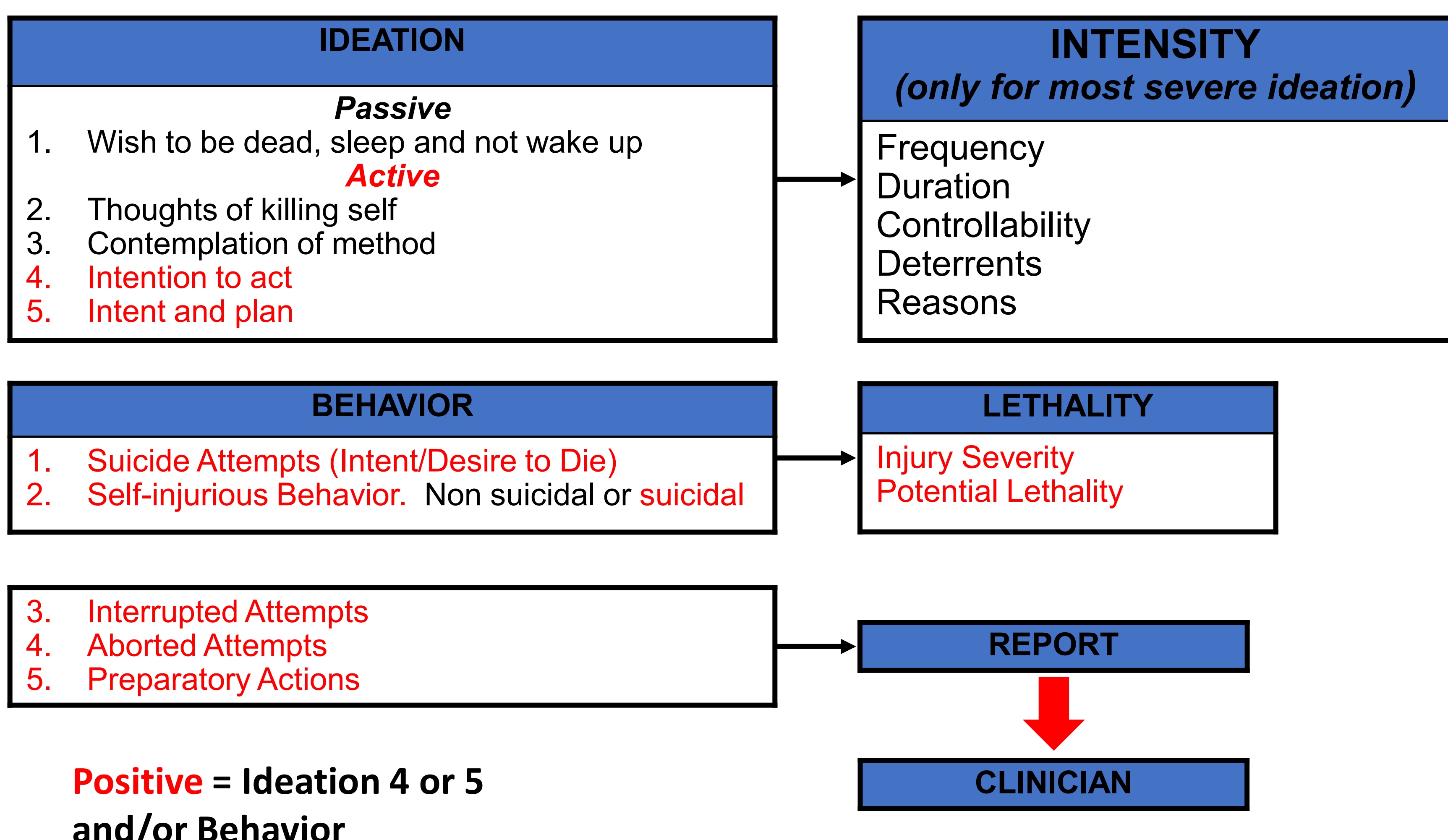
Self-report vs. Clinician Assessment of Suicidality

- Six research groups
- Six different suicidality assessments
- Seven studies over 49 years
- Self-report vs. clinician assessment

Self-report sensitivity always greater

Greist JH http://www.psychiatrist.com/JCP/article/Pages/2016/v77n07/v77n0711.aspx

Who Is Positive for High Risk?



Rationale for Selected Assessments

All assessments are validated for use in individuals aged 12 years and older.

eC-SSRS = Columbia Suicide Severity Rating Scale

- Used since 2008
- Gold standard
- Recommended by CDC, WHO, FDA,
  Joint Commission

Measuring Suicide Risk Factors

Depression and anxiety symptoms:

- Major risk factors for suicide
- Common diseases that affect function
  - Clinical depression by 18 years = 11%*
  - Clinical anxiety by 18 years = 32%*

Early treatment = better long-term outcomes

*Merikangas. JAACAP, 2010. **49**(10):980.

Validity of SLTC Screening Assessments

eC-SSRS (Suicide prediction scale)

- Digital suicide risk screening recommended in the US National Strategy for Suicide Prevention[1]
- Recognized by FDA for suicide risk assessment[2]
- Predicted short-term suicidal behaviors among high-risk adolescents[3]
- Predicted future suicide attempts among youth receiving emergency psychiatric services[4]
- Identified students at risk of suicide in schools, most previously unknown[5]
- When coupled to care, associated with reduction in students reporting suicidal ideation and attempts[6]

PHQ-A (Depression symptom scale) and GAD-7 (Anxiety symptom scale)

- Major risk factors for suicide that affect 11% (depression) and 18% (anxiety) of youth by 18 years[7]

Y-WSAS (Functioning) or CD-RISC-10 (Resilience)

- Functioning inversely related to depression and anxiety symptoms[8,9]
- Lower resilience scores associated with youth suicide attempts[10,11]

1 https://theactionalliance.org/resource/revised-national-strategy-suicide-prevention-20122012
2 Guidance for Industry: Suicidal Ideation and Behavior: Prospective Assessment of Occurrence in Clinical Trials. Draft Guidance. U.S. DHHS, FDA, CDER. August 2012.
3 Conway, et al. Arch Suicide Res. 2017;21(3):455-469. · 4 Gipson, et al. Pediatric Emergency Care. 2014;31(2):88-93. · 5 Scott, et al. Am J Public Health. 2009;99(2):334-339.
6 Arango, et al. Annu Rev Clin Psychol. 2021;17:259-284 . · 7 Merikangas, et al. JAACAP, 2010. 49(10):980. · 8 Jassi, et al., Child Psy & Hum Dev, 2020. 51:453.
9 Mundt, et al., Br J Psych, 2002. 180:461. · 10 Connor, et al. Depress Anxiety. 2003;18:76-82 . · 11 Nrugham, et al., J Nerv Ment Dis, 2010. 198(2):131.

Universal Screening and Referral to Prevent Suicide among Youth

School-based screening identifies youth at risk of suicide who are not receiving mental health care

- 72% of those who screen positive were not receiving mental health care[1]

School-based screening and linking to care increases mental health service use for those screening positive

- Among positive screens referred to mental health services = 70% follow up
- Among positive screens, mental health service use increases[2, 3, 4] and suicidal thoughts and behaviors decrease[2]

1 Gould, et al., JAACAP, 2009. 48(12):1193.
2 Torcasso and Hilt, Child Youth Care Forum, 2017. 46:35.
3 Husky et al., JAACAP, 2011. 50(9):881.
4 Husky et al., J Adol., 2011. 34:505.

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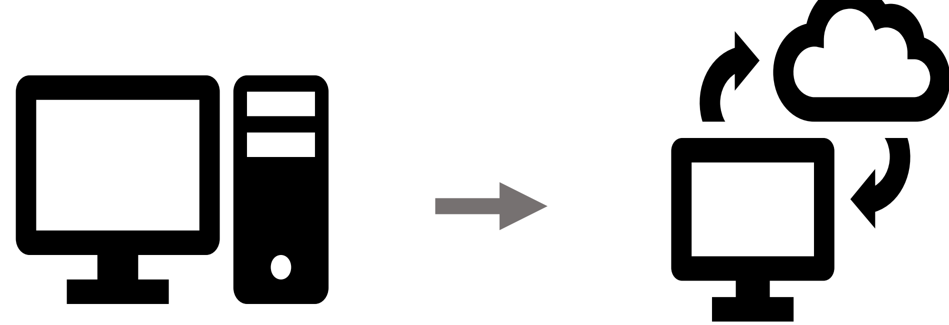
IMPROVING MENTAL HEALTH CARE FOR RURAL AMERICANS

Screener Results Reporting



Web-based screening
~8 minutes

Results within 1 minute
to school staff

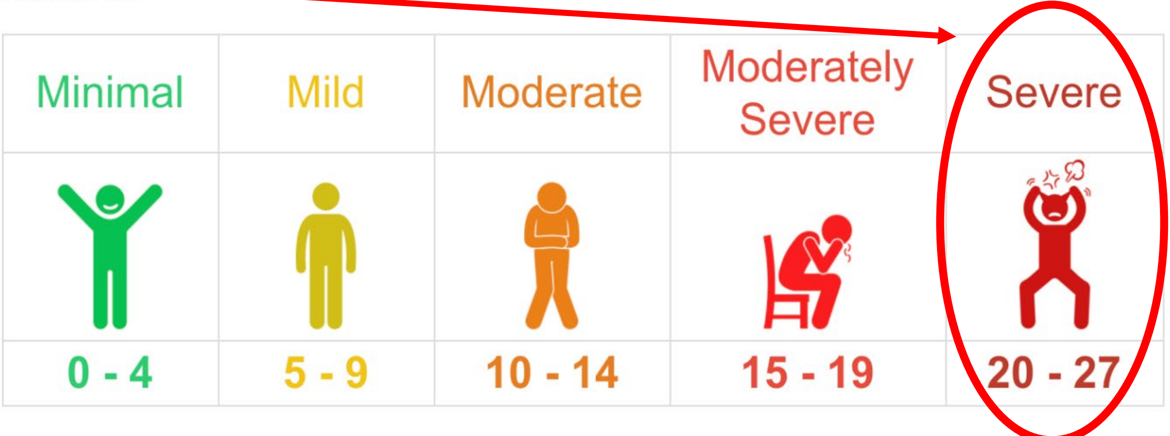
Email Report to School

Subject ID:
Project: eC-SSRS™ School Screening Demo
Location: Earth
Collection Date: March 16, 2021

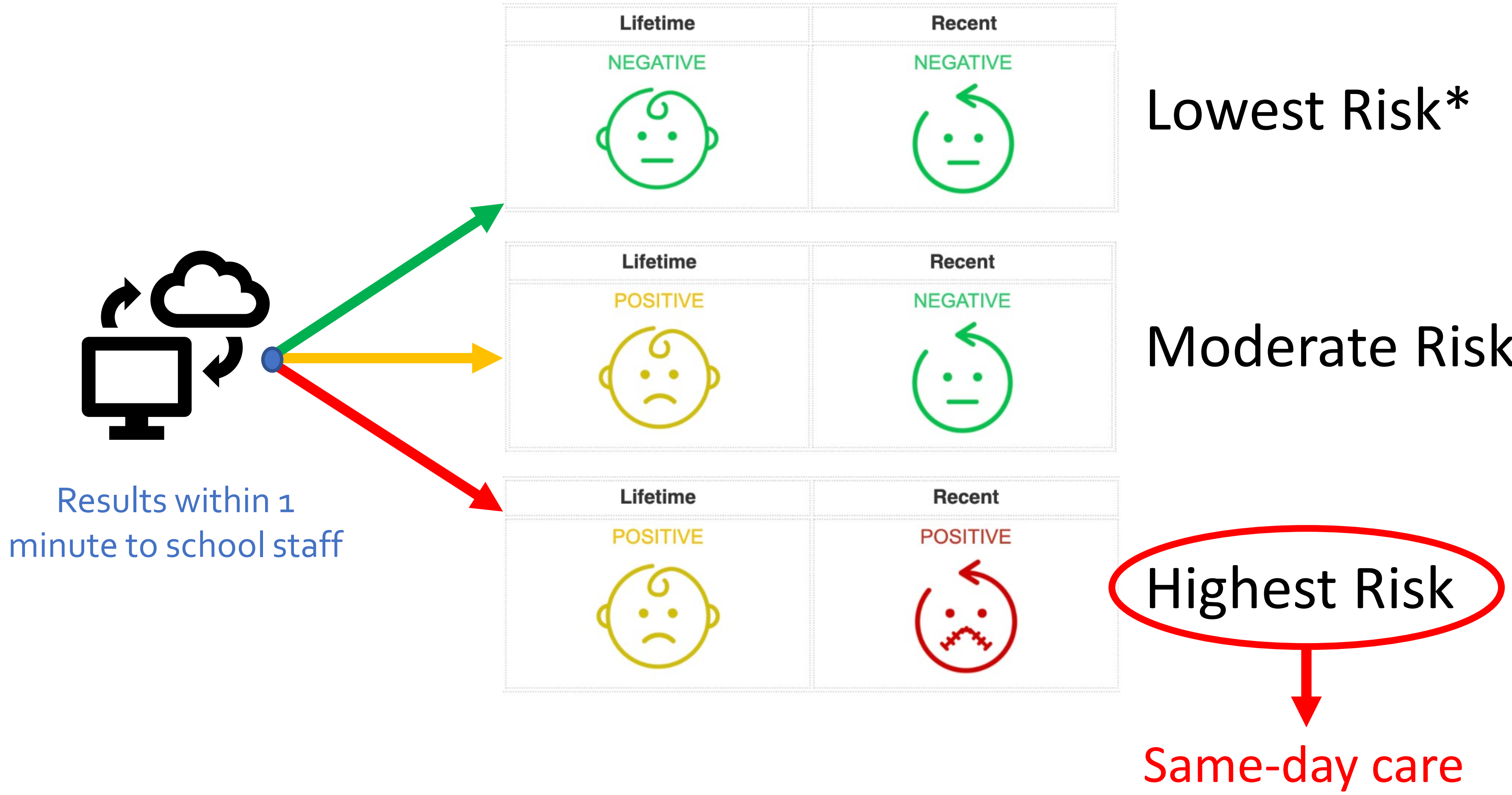
eC-SSRS Results

PHQ-A Results: DEPRESSION Severity Scale

PHQ-A Score: 21



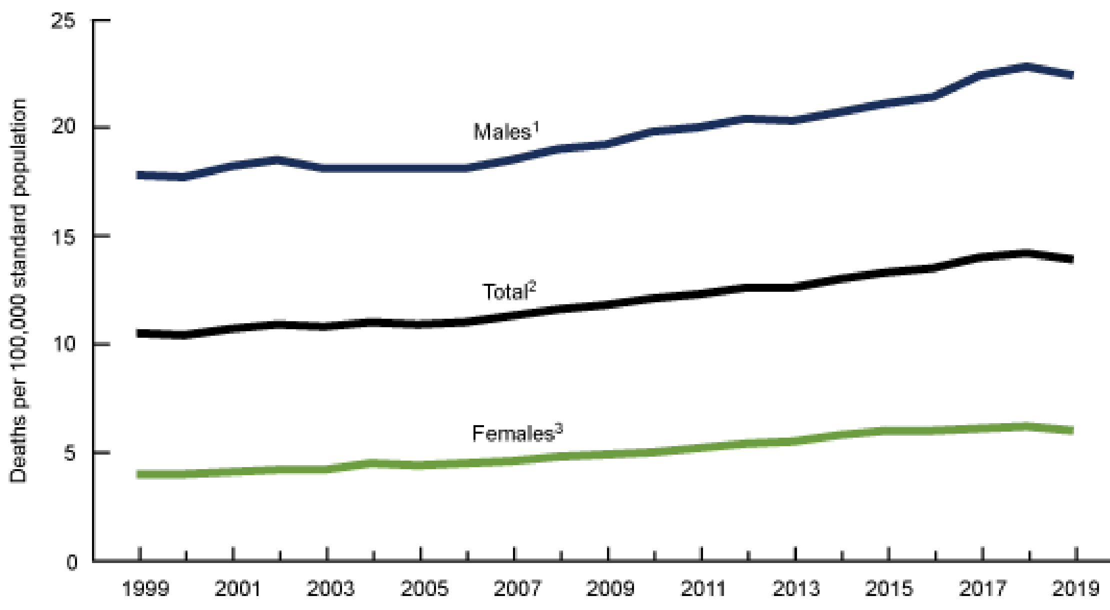
Top of Email: Suicide Risk Reporting



*Low risk result does not indicate zero risk of suicide

US Suicide Rates by Gender 1999-2019

- US in 2019:
  - Total suicides: 47,511
  - Total suicide attempts: 1.38 million



National Center for Health Statistics, National Vital Statistics System, Mortality.