Suicide Risk Assessment and Prevention in Adulthood

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Today's Agenda & Learning Objectives

1. **Epidemiology of suicide:** To describe the most common risk factors for suicide attempts and deaths in primary care

2. **Best practices for suicide risk assessment:** To understand essential components of suicide risk assessment

3. **Risk management strategies:** To identify evidence-based suicide risk management interventions

PART 1

Epidemiology & Scope of the Problem

Who is most at risk?

Ranks (number of deaths)

CDC Data on the number of suicide deaths in 2018

Adults in the middle years of life (35-64): 24,406

50% of suicide deaths

vs

Young people (10-24): 13,614

28% of suicide deaths

10 Leading Causes of Death by Age Group, United States – 2018

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital Anomalies 4,473	Unintentional Injury 1,226	Unintentional Injury 734	Unintentional Injury 692	Unintentional Injury 12,044	Unintentional Injury 24,614	Unintentional Injury 22,667	Malignant Neoplasms 37,301	Malignant Neoplasms 113,947	Heart Disease 526,509	Heart Disease 655,381
2	Short Gestation 3,679	Congenital Anomalies 384	Malignant Neoplasms 393	Suicide 596	Suicide 6,211	Suicide 8,020	Malignant Neoplasms 10,640	Heart Disease 32,220	Heart Disease 81,042	Malignant Neoplasms 431,102	Malignant Neoplasms 599,274
3	Maternal Pregnancy Comp. 1,358	Homicide 353	Congenital Anomalies 201	Malignant Neoplasms 450	Homicide 4,607	Homicide 5,234	Heart Disease 10,532	Unintentional Injury 23,056	Unintentional Injury 23,693	Chronic Low. Respiratory Disease 135,560	Unintentional Injury 167,127
4	SIDS 1,334	Malignant Neoplasms 326	Homicide 121	Congenital Anomalies 172	Malignant Neoplasms 1,371	Malignant Neoplasms 3,684	Suicide 7,521	Suicide 8,345	Chronic Low. Respiratory Disease 18,804	Cerebro-vascular 127,244	Chronic Low. Respiratory Disease 159,486
5	Unintentional Injury 1,168	Influenza & Pneumonia 122	Influenza & Pneumonia 71	Homicide 168	Heart Disease 905	Heart Disease 3,561	Homicide 3,304	Liver Disease 8,157	Diabetes Mellitus 14,941	Alzheimer's Disease 120,658	Cerebro-vascular 147,810
6	Placenta Cord. Membranes 724	Heart Disease 115	Chronic Low. Respiratory Disease 68	Heart Disease 101	Congenital Anomalies 354	Liver Disease 1,008	Liver Disease 3,108	Diabetes Mellitus 6,414	Liver Disease 13,945	Diabetes Mellitus 60,182	Alzheimer's Disease 122,019
7	Bacterial Sepsis 579	Perinatal Period 62	Heart Disease 68	Chronic Low Respiratory Disease 64	Diabetes Mellitus 246	Diabetes Mellitus 837	Diabetes Mellitus 2,282	Cerebro-vascular 5,128	Cerebro-vascular 12,789	Unintentional Injury 57,213	Diabetes Mellitus 84,946
8	Circulatory System Disease 428	Septicemia 54	Cerebro-vascular 34	Cerebro-vascular 54	Influenza & Pneumonia 200	Cerebro-vascular 567	Cerebro-vascular 1,704	Chronic Low. Respiratory Disease 3,807	Suicide 8,540	Influenza & Pneumonia 48,888	Influenza & Pneumonia 59,120
9	Respiratory Distress 390	Chronic Low. Respiratory Disease 50	Septicemia 34	Influenza & Pneumonia 51	Chronic Low. Respiratory Disease 165	HIV 482	Influenza & Pneumonia 956	Septicemia 2,380	Septicemia 5,956	Nephritis 42,232	Nephritis 51,386
10	Neonatal Hemorrhage 375	Cerebro-vascular 43	Benign Neoplasms 19	Benign Neoplasms 30	Complicated Pregnancy 151	Influenza & Pneumonia 457	Septicemia 829	Influenza & Pneumonia 2,339	Influenza & Pneumonia 5,858	Parkinson's Disease 32,988	Suicide 48,344

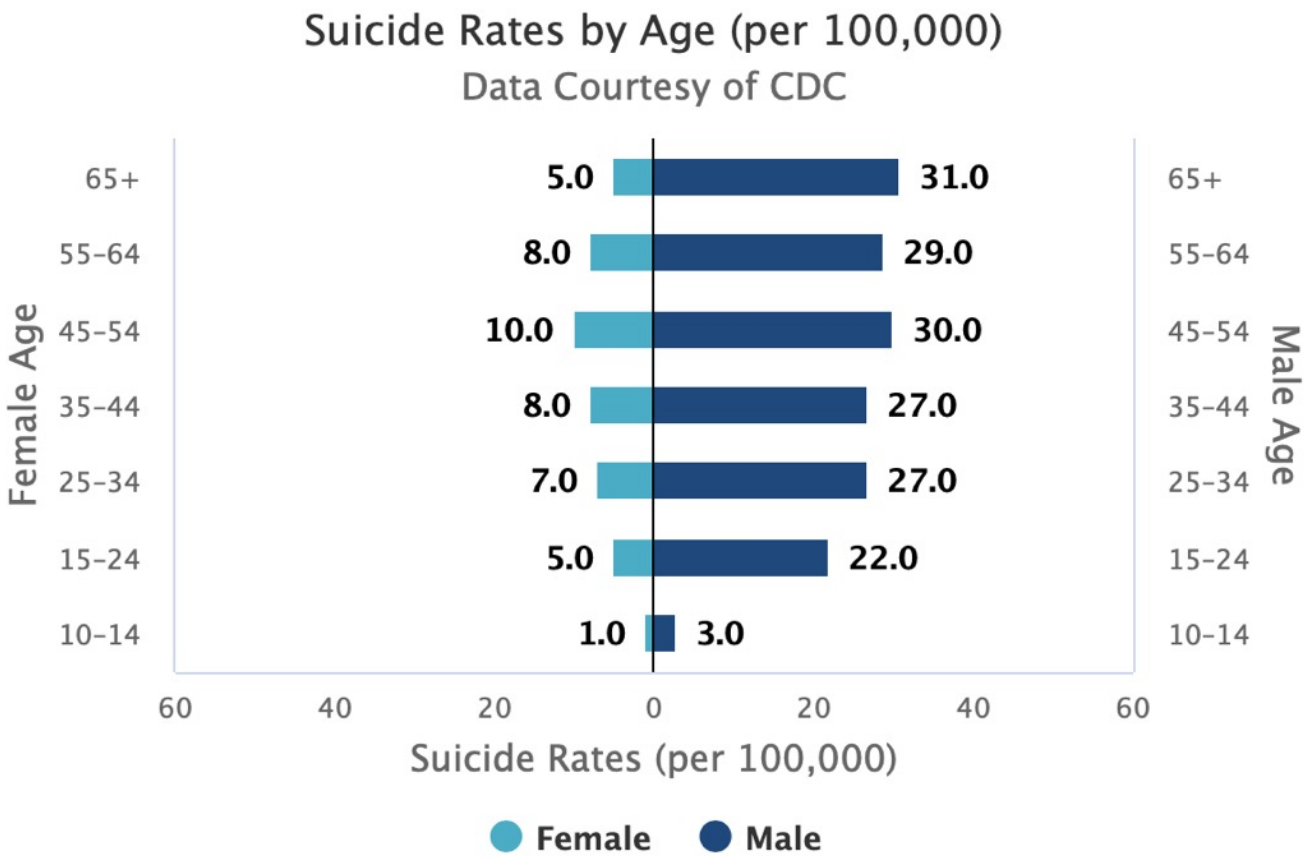
Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Who is most at risk?

Rates (number per 100,000)

- Men are more likely to die by suicide (women are more likely to attempt but survive)
- Rates increase in mid-life and then again in later life, highest rate for white men over 80
  - Cohort effects are key
- Native Americans have markedly elevated rates for youth



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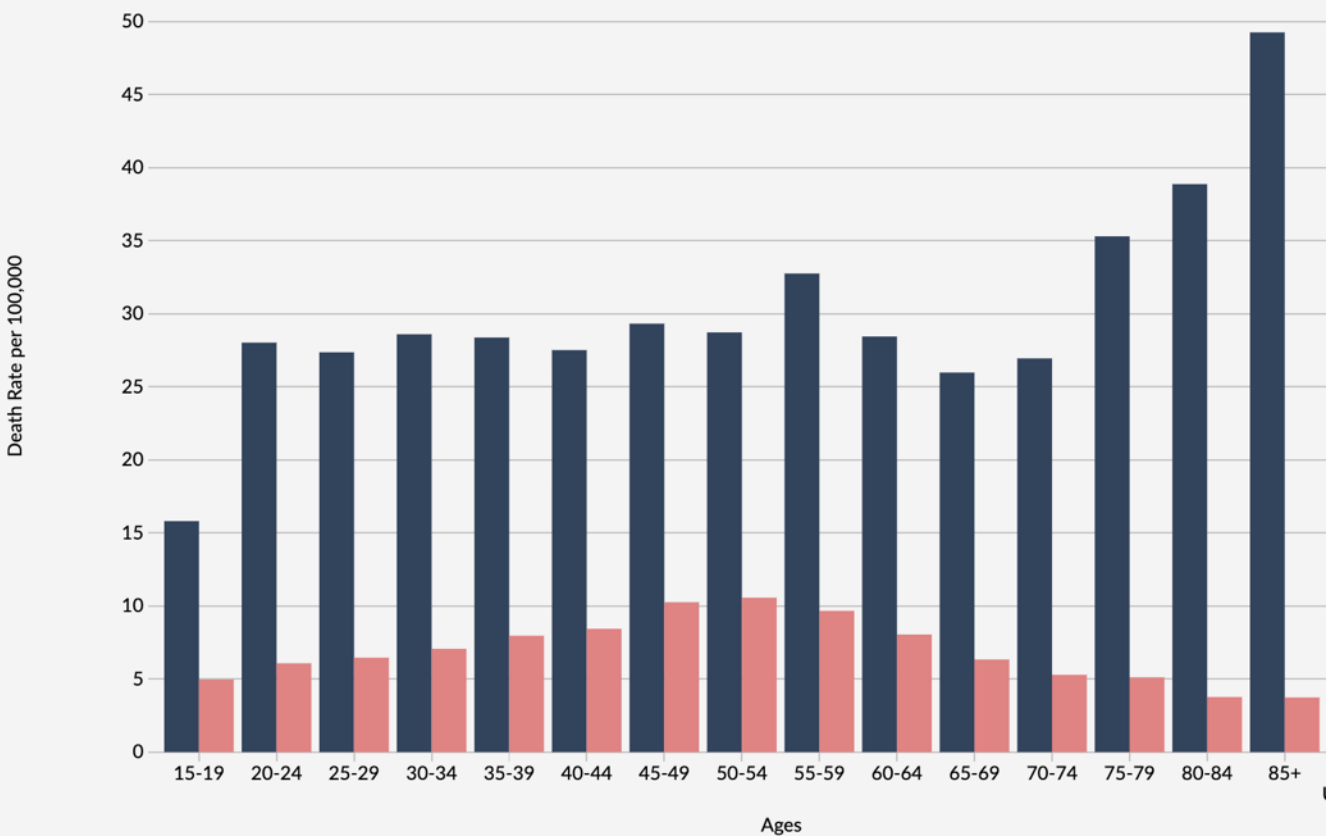
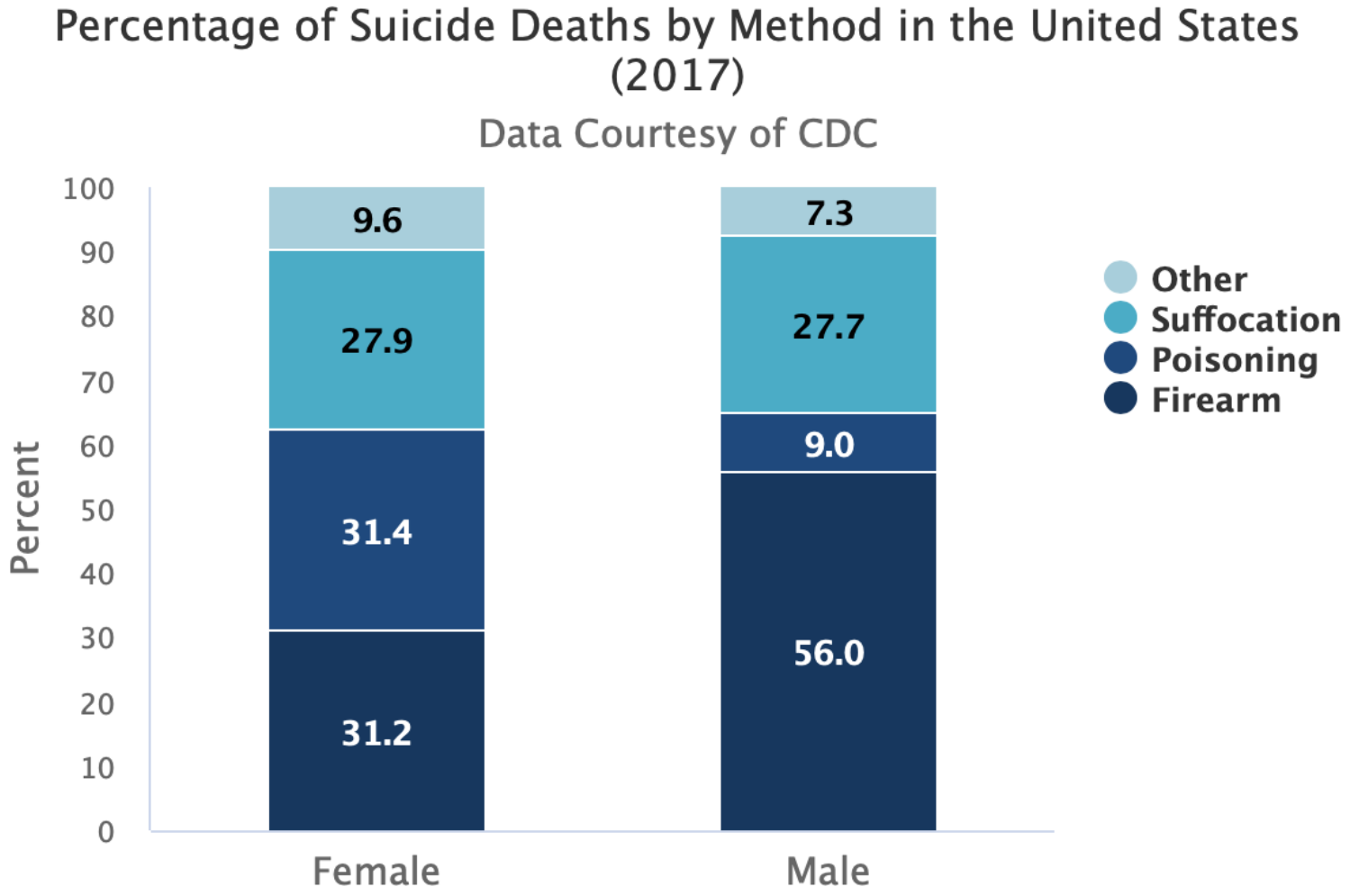


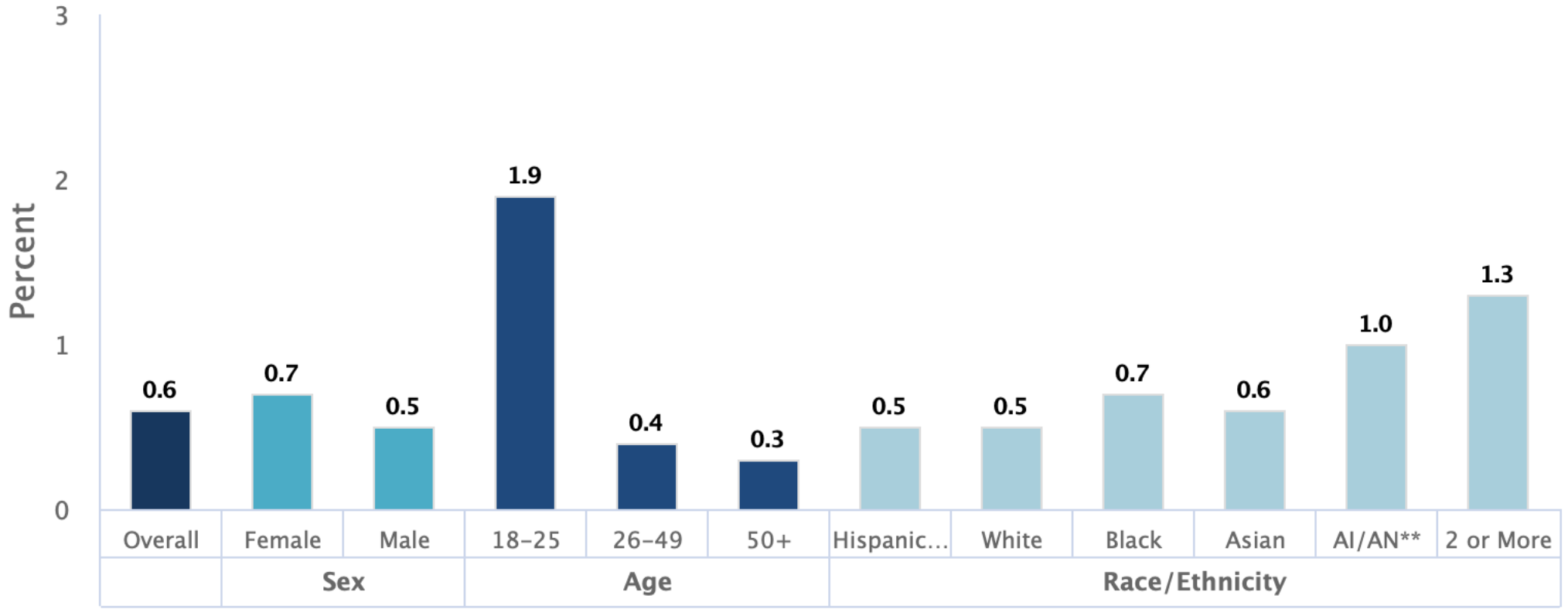
Suicide methods

- In the U.S. most suicide deaths are due to firearms.
- Firearm safety is a key risk management strategy.



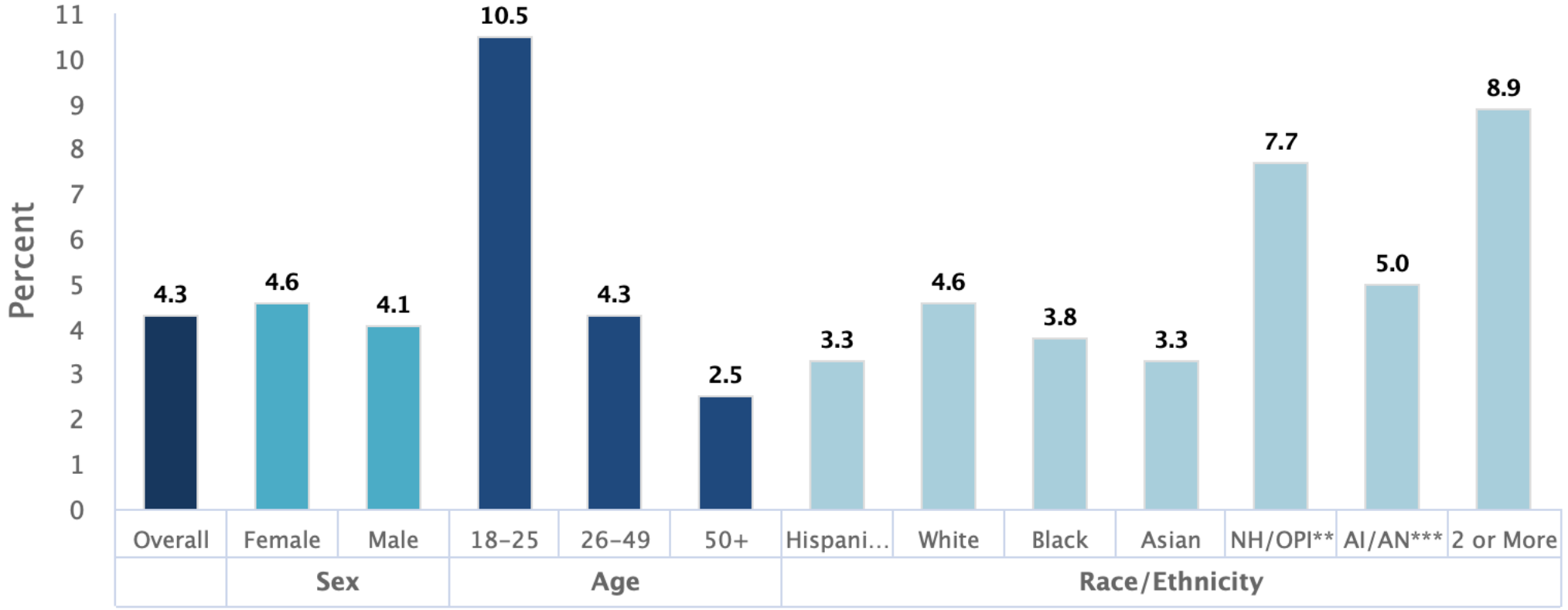
Past Year Prevalence of Suicide Attempts Among U.S. Adults (2017)

Data Courtesy of SAMHSA



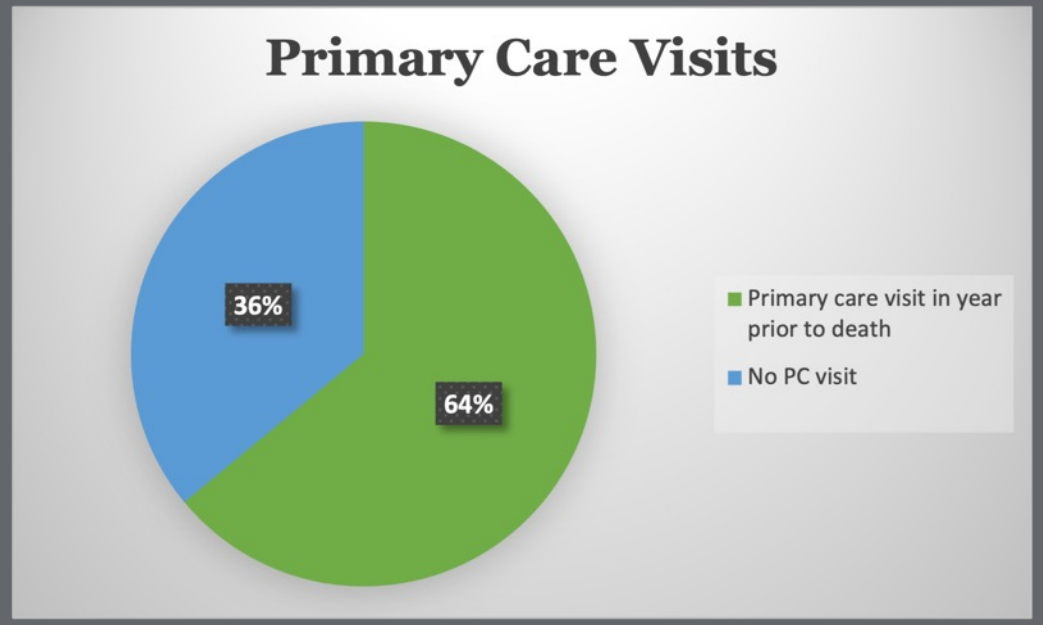
Past Year Prevalence of Suicidal Thoughts Among U.S. Adults (2017)

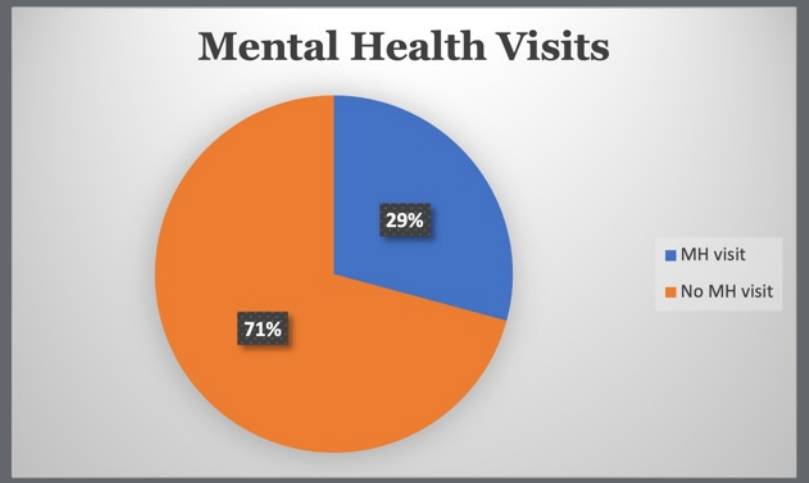
Data Courtesy of SAMHSA

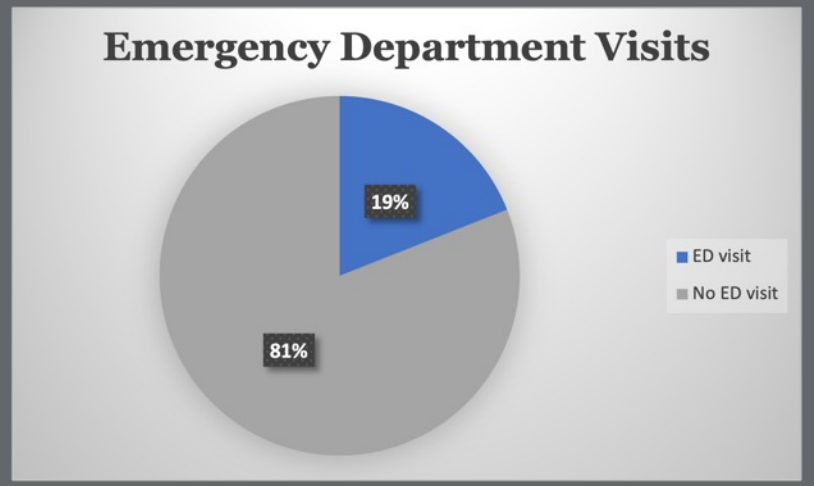


Primary care is a key setting for suicide prevention:

Most individuals who die by suicide are seen in primary care in the weeks and months before their deaths







Data from Ahmedani BK, Simon GE, Stewart C, et al. Health care contacts in the year before suicide death. J Gen Intern Med. 2014;29(6):870-877. 10.1007/s11606-014-2767-3 4026491.

Depression is not the only risk factor:

'Ideation to action'

Table 1 Survival models of the associations between temporally before lifetime DSM-IV/CIDI disorders and subsequent first occurrence of a suicide attempt

	Response variable: lifetime attempt among total sample (n = 5692)					
	Bivariate[a]		*Multivariate additive*[b]		*Multivariate interactive*[c]	
	OR (95% CI)	χ^2	*OR (95% CI)*	χ^2	*OR (95% CI)*	χ^2
I. Anxiety disorders						
Panic disorder	5.3 (3.8–7.3)*	100.3*	1.7 (1.1–2.5)*	6.6*	1.9 (1.3–2.8)*	13.4*
GAD	4.6 (3.2–6.6)*	73.2*	1.4 (0.9–2.2)	2.1	1.6 (1.0–2.6)	3.4
Specific phobia	2.8 (2.3–3.6)*	81.8*	1.3 (1.1–1.7)*	6.0*	1.3 (1.0–1.7)	3.4
Social phobia	4.1 (3.2–5.1)*	148.1*	1.9 (1.4–2.5)*	17.7*	1.8 (1.3–2.6)*	13.2*
PTSD	5.7 (4.3–7.4)*	167.4*	1.9 (1.3–2.7)*	11.6*	2.1 (1.5–2.9)*	19.2*
SAD	3.3 (2.6–4.2)*	91.2*	1.2 (0.9–1.6)	1.6	1.3 (1.0–1.8)	3.4
Agoraphobia	2.7 (1.6–4.7)*	13.5*	1.1 (0.6–1.8)	0.0	1.3 (0.7–2.4)	0.6
Any anxiety disorder	4.6 (3.6–5.7)*	188.3*	—		—	
II. Mood disorders						
MDD	5.1 (3.9–6.7)*	156.4*	2.0 (1.4–2.8)*	16.1*	2.0 (1.4–3.0)*	12.8*
Dysthymia	4.9 (3.3–7.1)*	71.9*	0.8 (0.5–1.3)	0.6	1.1 (0.7–1.7)	0.1
Bipolar disorder	6.7 (4.6–9.7)*	103.3*	1.9 (1.2–3.1)*	7.5*	2.3 (1.5–3.5)*	15.4*
Any mood disorder	5.2 (4.0–6.7)*	174.3*	—		—	
III. Impulse-control disorders						
ODD[d]	4.8 (3.7–6.2)*	149.0*	1.7 (1.2–2.3)*	10.3*	1.7 (1.2–2.3)*	10.6*
Conduct disorder[d]	4.9 (3.6–6.6)*	111.5*	1.6 (1.1–2.2)*	8.1*	1.8 (1.3–2.6)*	11.2*
ADHD[d]	4.4 (3.3–6.0)*	99.7*	1.3 (0.9–1.9)	2.6	1.5 (1.0–2.2)*	4.4*
IED	3.3 (2.5–4.5)*	69.3*	1.4 (1.0–2.0)*	5.0*	1.5 (1.1–2.1)*	6.1*
Any impulse-control disorder[d]	4.8 (3.7–6.2)*	151.0*	—		—	
IV. Substance use disorders						
Alcohol abuse or dependence	4.8 (3.6–6.4)*	120.9*	2.1 (1.3–3.1)*	11.7*	2.2 (1.4–3.4)*	11.3*
Drug abuse or dependence	4.2 (2.8–6.3)*	52.8*	0.9 (0.5–1.6)	0.1	1.1 (0.7–1.8)	0.3
Any substance use disorder	4.8 (3.6–6.6)*	109.6*	—		—	
Any disorder	7.0 (5.5–8.9)*	280.3*	—		—	
$\chi^{2\,e}_{17}$				909.9*		160.7*

Why do people take their lives?

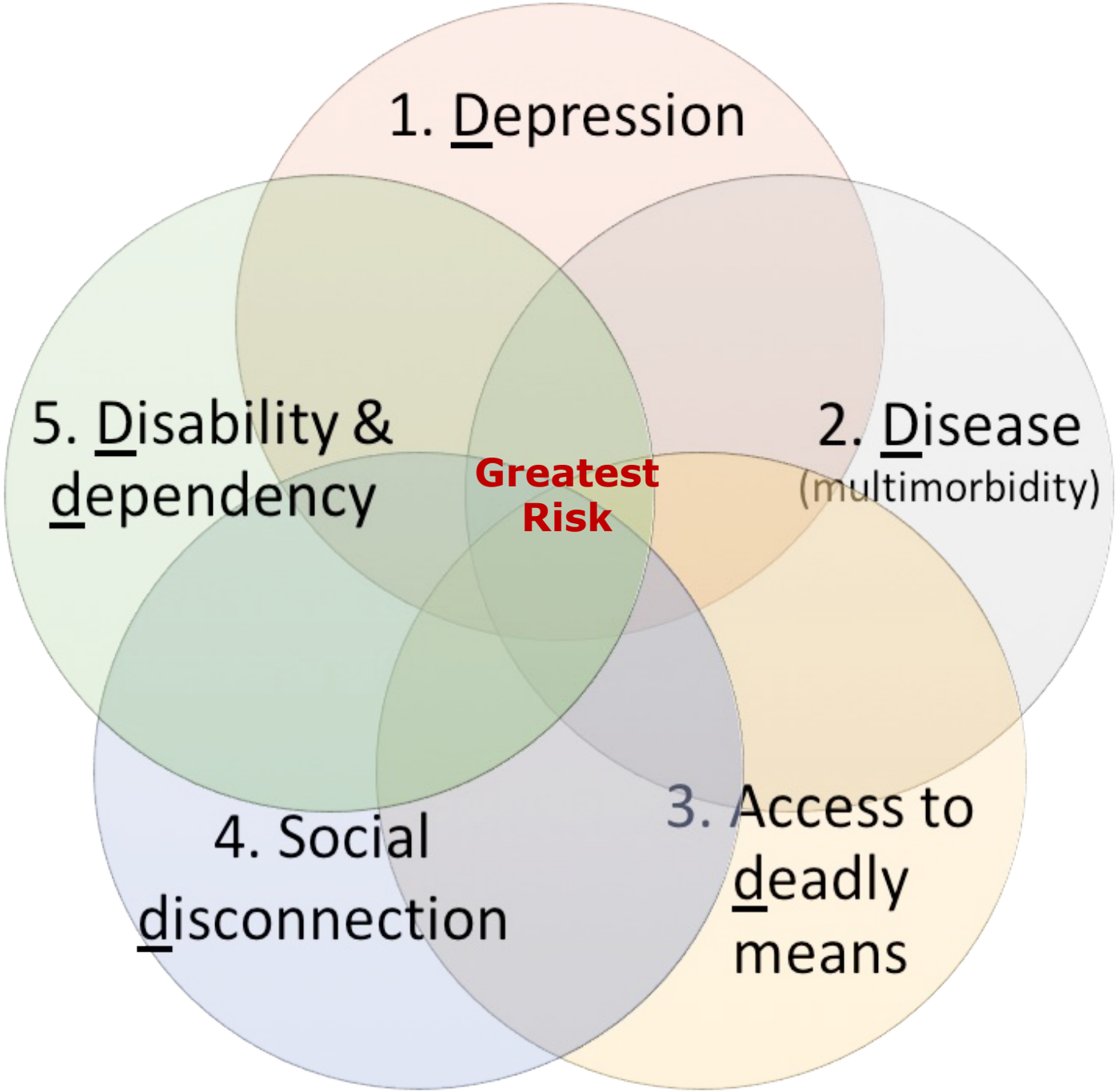
People who feel suicidal typically face multiple problems. Risk factors include:

- *Drug and alcohol problems*
- *Depression and other mental illness*
- *Impulsiveness and aggressiveness*
- *Family history of suicide*
- *Parental psychopathology*
- *Previous attempts*
- *Recent losses or setbacks*
- *Feeling hopeless*

Feeling hopeless is probably the most common theme.

5 Dimensions of Risk in Later Life

1. Psychiatric illness (primarily **d**epression)
2. Physical illness (multiple comorbid **d**iseases)
3. Access to lethal (**d**eadly) means (e.g., firearms)
4. Social **d**isconnection (isolation, loneliness, family conflict)
5. **D**isability (functional impairment) & distress over **d**ependency (feeling like a burden)



Conwell, Van Orden, & Caine (2011); Van Orden & Conwell (2011); Van Orden, Silva, & Conwell (2018)

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PART 2

Suicide risk assessment

Why do we use screening tools?

The goal of suicide risk assessment is NOT a prediction about whether a patient will die by suicide.

The goal IS to determine the most appropriate actions to take to keep a patient safe.

We need to take action for all endorsements of suicide ideation, but not the same action for every type of endorsement.

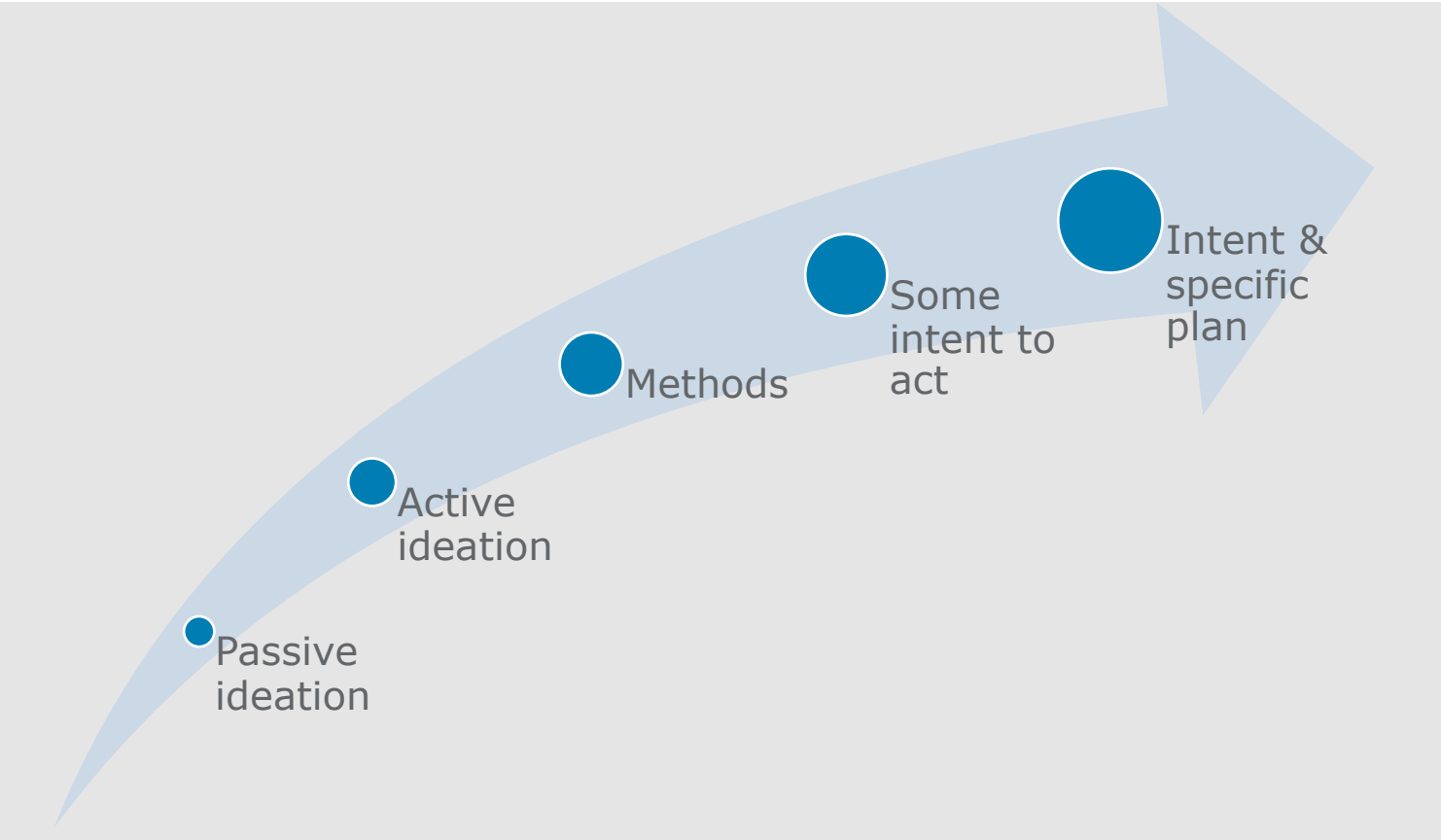
Key Components

1. Your attitude: collaboration, connection, [your] comfort.
2. Gathering information (asking questions).
3. Making sense of the information and organizing it (assessment).
4. Taking actions while meeting with patient (responding/planning)
5. Taking actions after mtg with patient (extending)

The evidence base for these actions

- There are no evidence-based assessment methods for suicide risk (*preventing* suicidal behavior).
- Only three randomized trials of interventions shown to prevent suicide deaths in the world, ever.
- Psychotherapies & collaborative care models for depression have been shown to reduce the severity (or frequency) of suicidal thoughts and prevent non-lethal suicide attempts.

Definitions



- Types of suicide ideation
  - Passive: wish to be dead
  - Active thoughts of killing yourself
  - Consideration of methods
  - Some intent to act
  - Intent and specific plan (imminent risk)
- Types of suicidal behavior:
  - Suicide attempt (multiple attempts)
  - Interrupted attempt
  - Aborted attempt
  - Preparatory behavior
  - (NSSI)

Image adapted from McDowell et al. Practical Suicide-Risk Management for the Busy Primary Care Physician. Mayo Clinic Proceedings. 2011; 86(8).
Definitions from the Columbia Suicide Severity Rating Scale.

Two-step screening

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✓" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____
=Total Score: _____

Figure 1. P4 Screener for Assessing Suicide Risk[a,b]

Have you had thoughts of actually hurting yourself?
NO YES
4 Screening Questions

1. Have you ever attempted to harm yourself in the past?
NO YES

2. Have you thought about how you might actually hurt yourself?
NO YES → [How? _____]

3. There's a big difference between having a thought and acting on a thought. How likely do you think it is that you will act on these thoughts about hurting yourself or ending your life some time over the next month?
a. Not at all likely _____
b. Somewhat likely _____
c. Very likely _____

4. Is there anything that would prevent or keep you from harming yourself?
NO YES → [What? _____]

	Shaded ("Risk") Response	
Risk Category	Items 1 and 2	Items 3 and 4
Minimal	Neither is shaded	Neither is shaded
Lower	At least 1 item is shaded	Neither is shaded
Higher		At least 1 item is shaded

[a]P4 is a mnemonic for the 4 screening questions: *past* suicide attempt, suicide *plan*, *probability* of completing suicide, and *preventive* factors.

[b]Any individual who responds "yes" to a question about thoughts of self-harm is asked 4 additional questions—the 4 *P*'s on past history, plan, probability, and preventive factors. Shaded responses are those that are more concerning for suicidal ideation.

- PHQ-9, item 9
  - Thoughts that you would be better off dead or of hurting yourself in some way?
  - If positive (any >0)→
- P4 Screener
  - Dube et al., J Clin Psychiatry 12:e1-e8, 2010

Columbia Suicide Severity Rating Scale

Semi-structured interview

- Flexible: suggested prompts, goal is to get the info you need; don't need to ask questions you don't need.
- Also self-report version

Benefits:

- Comprehensive: includes worst point and many types of behavior
- Standard definitions
- Useful suggested prompts

Tips for asking about suicide

Gentle persistence:

- "No, not really" usually means some form of suicidal thinking is present.
  - Some individuals think that we are not interested in hearing about their suicide ideation unless they are seriously thinking about taking action.
- "What kind of thoughts have you had, even if they were just fleeting or you wouldn't act on them?"

Normalizing helps people feel comfortable:

- "When people are feeling upset or stressed, they sometimes have thoughts that they wish they were dead. Have you ever had thoughts like this?"

Gentle assumptions help individuals feel comfortable telling you about suicidal thoughts:

- "What other ways have you thought about killing yourself?"

Adapted from Shea (1999), *The Practical Art of Suicide Risk Assessment*

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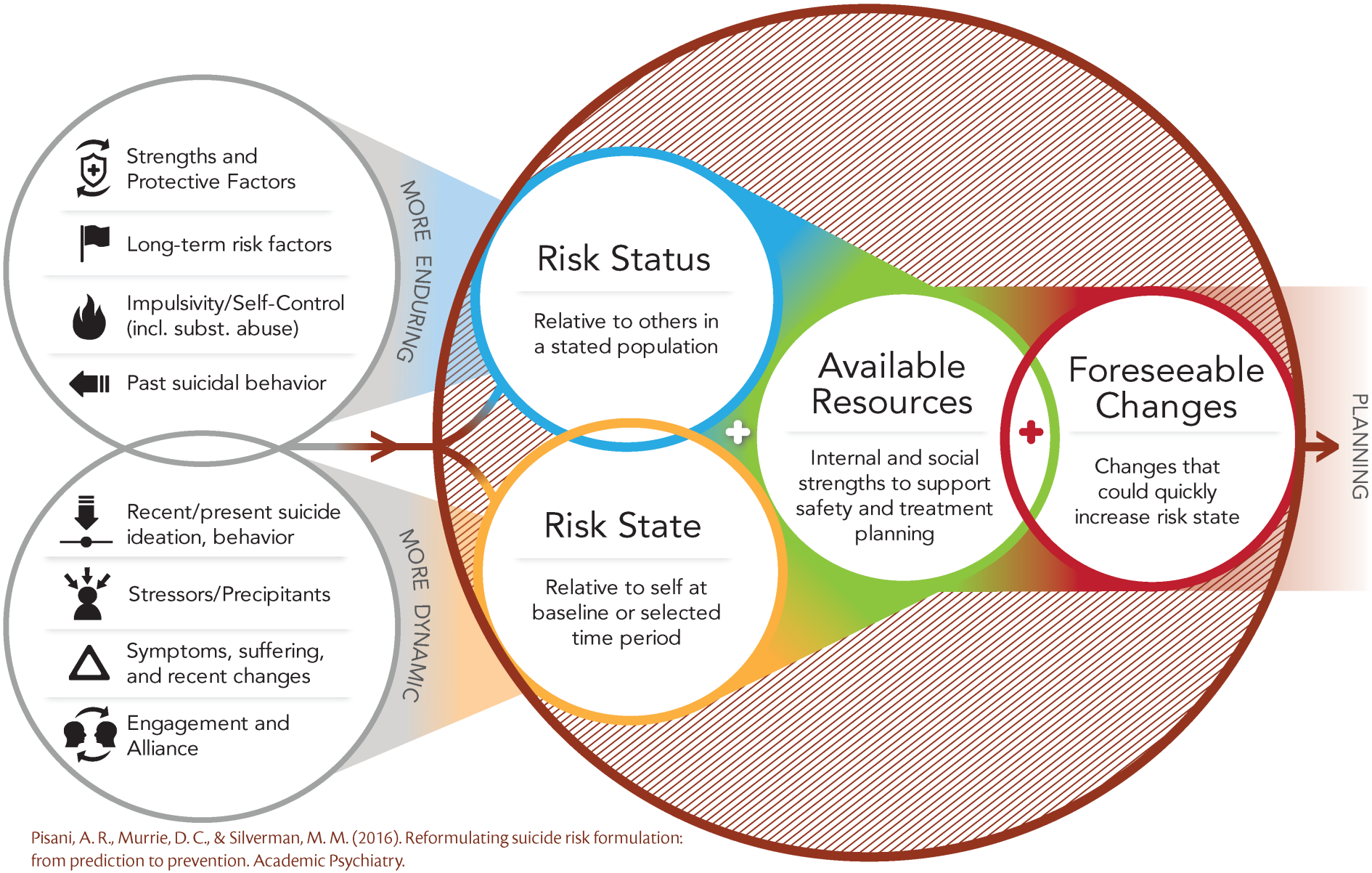
PART 3

Suicide risk management

Clinical data

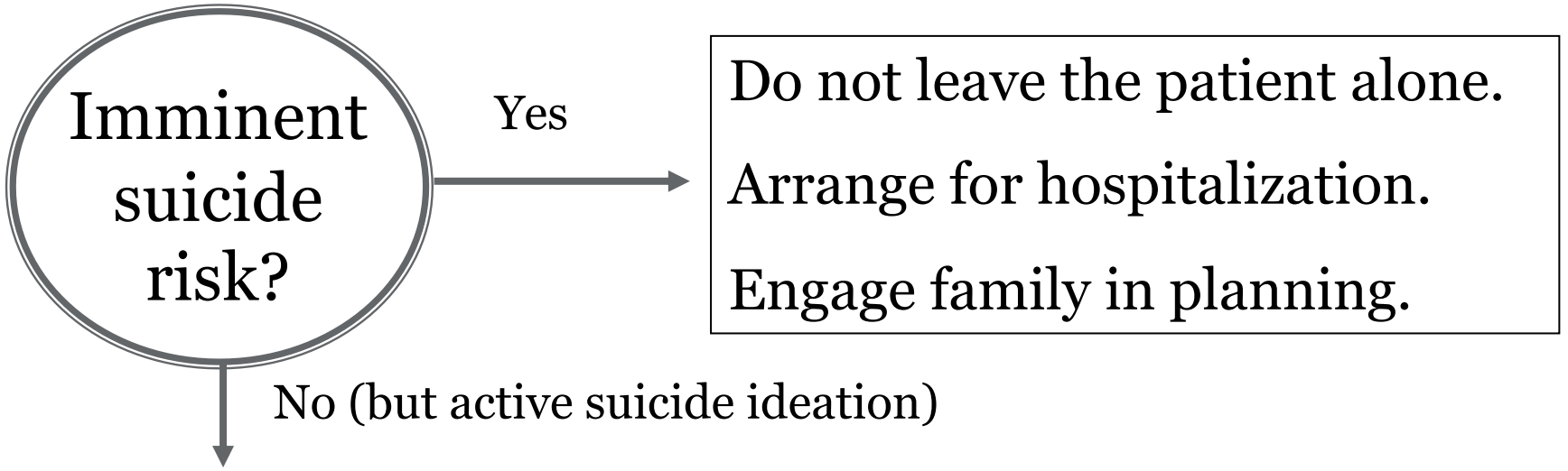
Risk Formulation

(Pisani, Murrie, & Silverman, 2016)



Pisani, A. R., Murrie, D. C., & Silverman, M. M. (2016). Reformulating suicide risk formulation: from prediction to prevention. Academic Psychiatry.

Risk Management Actions



Safety Planning

- Brief clinical intervention that results in a prioritized written list of warning signs, coping strategies, and resources to use during a suicidal crisis.
- Safety Planning plus caring contacts (Stanley et al., 2018):
  - 45% fewer suicidal behaviors, approximately halving the odds of suicidal behavior over 6 months (odds ratio, 0.56; 95% CI, 0.33-0.95, P = .03)
  - More than double the odds of attending at least 1 outpatient mental health visit (odds ratio, 2.06; 95% CI, 1.57-2.71; P < .001).

SAFETY PLANNING

COPING:
Focus on breathing, play with dog, pray

PEOPLE/PLACES:
Go to coffee shop, call friend (Bill 777-7777)
Text daughter Melissa

SAFETY:
Bill will keep my rifles until I feel better

FOR EMERGENCIES:
Call wife Linda (888-8888)
Call Dr. Price (999-999-9999)

FRIENDSHIP LINE: 800.971.0016

SUICIDE PREVENTION HOTLINE:
800.272.TALK (8255) Press "1" for Veterans

YOUR VA HOSPITAL EMERGENCY DEPARTMENT:
MEDVAMC - 2002 Holcombe
911

A PERSONAL SAFETY PLAN

NATIONAL SUICIDE PREVENTION LIFELINE
1-800-273-TALK (8255)
suicidepreventionlifeline.org

RED FLAGS
I KNOW SOMETHING'S WRONG WHEN I FEEL THIS WAY
- _____
- _____
- _____

WHEN I DO THESE, I FEEL BETTER
PERSONAL COPING STRATEGIES TO TAKE MY MIND OFF THINGS
- _____
- _____
- _____

PLACES TO GO, PEOPLE TO SEE
PEOPLE & PLACES THAT PROVIDE DISTRACTION

NAME _____ PLACE _____
NAME _____ PLACE _____

MY GO-TO FOLKS
MY CONFIDANTS & INNER CIRCLE

NAME _____ PHONE _____
NAME _____ PHONE _____
NAME _____ PHONE _____

TIME TO CALL THE PROS

CLINICIAN NAME _____ EMERGENCY PHONE # _____
CLINICIAN NAME _____ EMERGENCY PHONE # _____

LOCAL EMERGENCY SERVICE _____
EMERGENCY SERVICES PHONE _____
EMERGENCY SERVICES ADDRESS _____

THINGS I NEED TO DO TO BE SAFE
STEPS TO MAKE MY ENVIRONMENT OKAY
- _____
- _____
- _____

South Central MIRECC

MICHAEL E. DEBAKEY VETERANS AFFAIRS MEDICAL CENTER

Baylor College of Medicine

COLLABORATIVE SAFETY PLANNING FOR OLDER ADULTS

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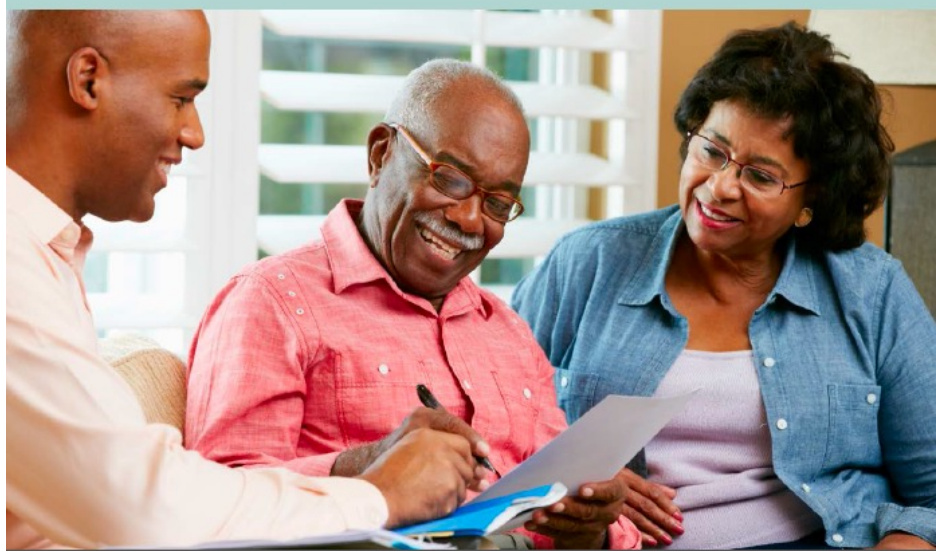
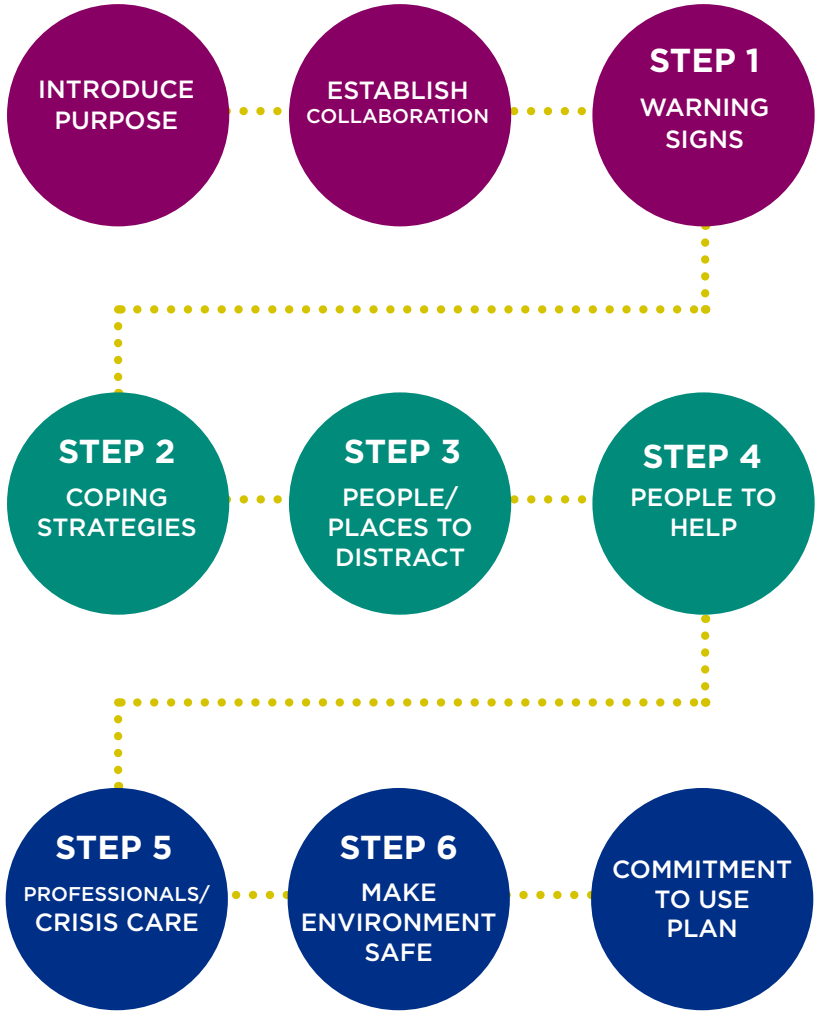


Safety Planning: THE STEPS



https://www.mirecc.va.gov/visn16/collaborative-safety-planning-manual.asp

Safety plans can address personalized risk factors

Table 1. Coping skills to target risk factors for late-life suicide during a crisis.

Depression symptoms	Disability & Dependence	Disease	Disconnectedness	Deadly Means
Anhedonia more common than sadness: pleasant activities, exercise, helping others, prayer/religious readings	Talk back to thoughts about being a burden (these thoughts are associated with suicidal behavior)	Take medications as prescribed; attend to physical illness to increase mastery; list primary care doctor's number	Loneliness: reach out to friends/ family, call support hotline, attend social groups, online support groups, plan for future social activities, write letters, help others, volunteer	Firearm safety: store unloaded firearms in a locked cabinet, separately from ammunition; use a gun lock
Irritability: exercise, soothe with 5 senses (music, tea, pets), relaxation exercises	Help/support others (in a way that is safe) to counter burden thoughts	Refocus attention on reasons for living and meaning.	Grief: journaling, looking at photographs, writing a letter to loved one; containment exercises if grief is too intense	Enlist family in helping with safe storage of medications
Apathy: enlist family to schedule & start pleasant events	Practice meditation & acceptance exercises to tolerate distress	Coping skills for stressors involving lack of control: Relaxation & other pain management strategies	List resources for transportation assistance on plan	Planned check-ins with family, neighbors, providers
Insomnia: Sleep hygiene	Activities that promote feelings of dignity	List helpful thoughts to cope with hopelessness about illness (especially new diagnoses)	Go to common areas (if in senior housing), listen to the radio or music, distract with mentally engaging activities (e.g., puzzles)	Remove alcohol from home during crises

INDICATED PREVENTION

- Routine screening for depression
  - PHQ-9, GDS, CES-D, PROMIS
  - Screening for suicidal ideation and intent
- Diagnose and treat depression to remission
  - Depression treatment is effective, including at reducing suicidal ideation and *maybe* suicidal behavior
  - Antidepressants, lithium, ketamine/esketamine
  - Psychotherapy for suicidal behavior—including Problem Solving Therapy
  - Collaborative care
    - Meta-analysis indicating a small, but reliable effect of collaborative care for reducing suicide ideation, especially when embedded psychotherapy is part of the CCM (Grigoroglou et al., 2021)
- Suicide-specific interventions:
  - Safety Planning
  - Caring Contacts
  - Address social determinants of health
  - Means safety
  - 1-800-273-TALK

Why do people take their lives?

Suicide attempts are rarely "out of the blue." Attempters typically face multiple problems–some long term, some short term.

The moment when they take action, however, is often during a brief period of heightened vulnerability.

One of the most powerful risk factors for suicide deaths is the ready availability of highly lethal methods.

In the U.S., that means guns.

https://www.hsph.harvard.edu/means-matter/lethal-means-counseling/

Means Matter
Suicide, Guns & Public Health

Resources

Ahmedani BK, Simon GE, Stewart C, et al. Health care contacts in the year before suicide death. J Gen Intern Med. 2014;29(6):870-877. 10.1007/s11606-014-2767-3 4026491.

Collaborative Care information and training: https://aims.uw.edu/collaborative-care

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Stay connected.

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