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Enhancing Risk Assessment across Mental Health Services

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Enhancing risk assessment across mental health services

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The objective

- Educate clinicians for minimizing the chances of error in clinical assessment for suicide behavior
- Training of non-psychiatric professionals for risk assessment
- Enhance standard of care

What is the purpose of risk assessment?

- Establish clinical needs
- Prediction of an attempt
- Decide level and quality of care
- Management issues
- Policy matters
- Patient safety
- Standard of care
- Component of suicide prevention

Assessment: Dimensions

1. Chances of suicide attempt in a time span (when)
2. Nature of intervention (what)
3. Setting of intervention (where)
4. Risk (how)
5. Personnel for assessment (who)

Training of the trainers

Identification

Assessment

Intervention

Deciding

nature of management,
level of monitoring,
need for hospitalization
and
planning of care

Limitations in Risk Assessment

- Too many factors and too many variations
- Prediction of suicide behavior has been a core area of research in suicidology
- Several psychological & biological Markers have been proposed.
- Neither are free from false positive and false negative results
- Conventional method has been a thorough clinical assessment which get enriched by aid of structured interviews.
- Scales are useful: either self-administered, clinician administered or computer-based

5.Soubrier JP.Beyond the scale: toward a new definition of suicide? Crisis. 1990 Nov;11(2):98-103.

Suicide in Clinical Practice is not uncommon

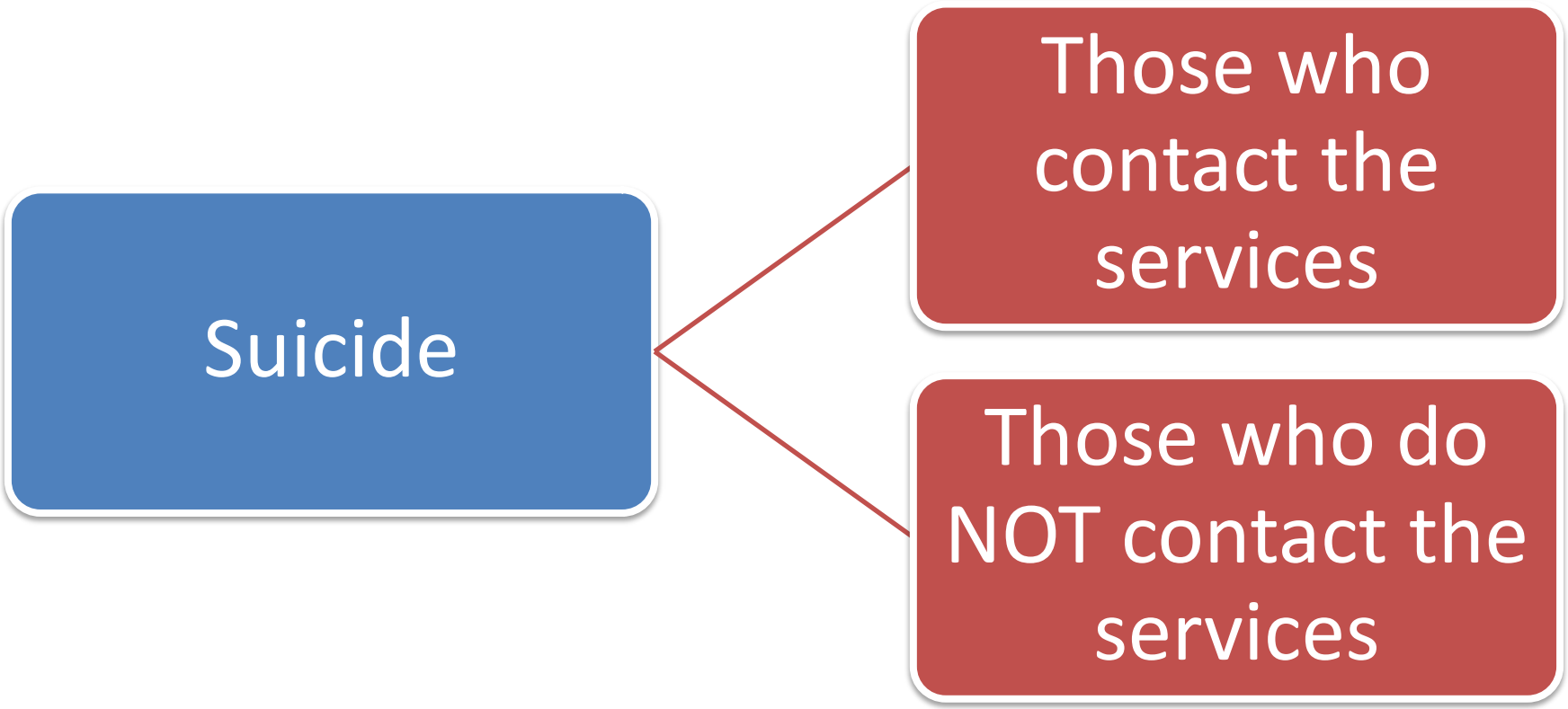
- 1 in 6 completed suicides are patients in psychotherapy
- 50% of completed suicides have had previous experience in psychotherapy
- 1 of every 2 psychiatrists will lose a patient to suicide across (mean) 19.3 years practice
- 30% psychiatric residents across 4 years' residency
- 1 of every 4 psychologists will lose a patient to suicide across (mean) 18.5 years practice
- 17% of psychology interns across 5.2 by internship

PROBLEMS ARISING FROM INADEQUATE RISK ASSESSMENT

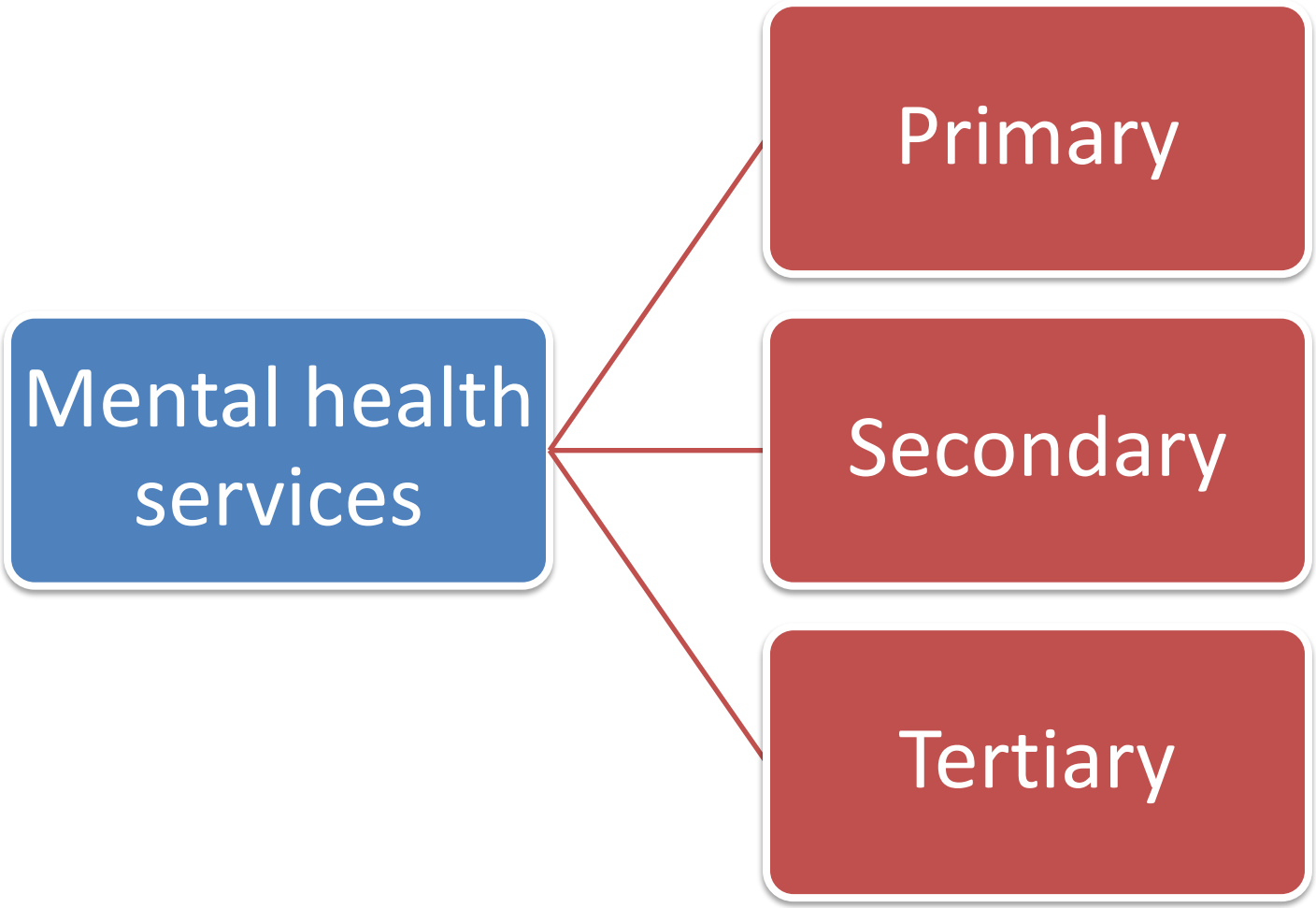
Outcomes in Risk Assessment

Clinical outcomes in management of suicide behavior depends on:
1. quality of assessment
2. quality of intervention

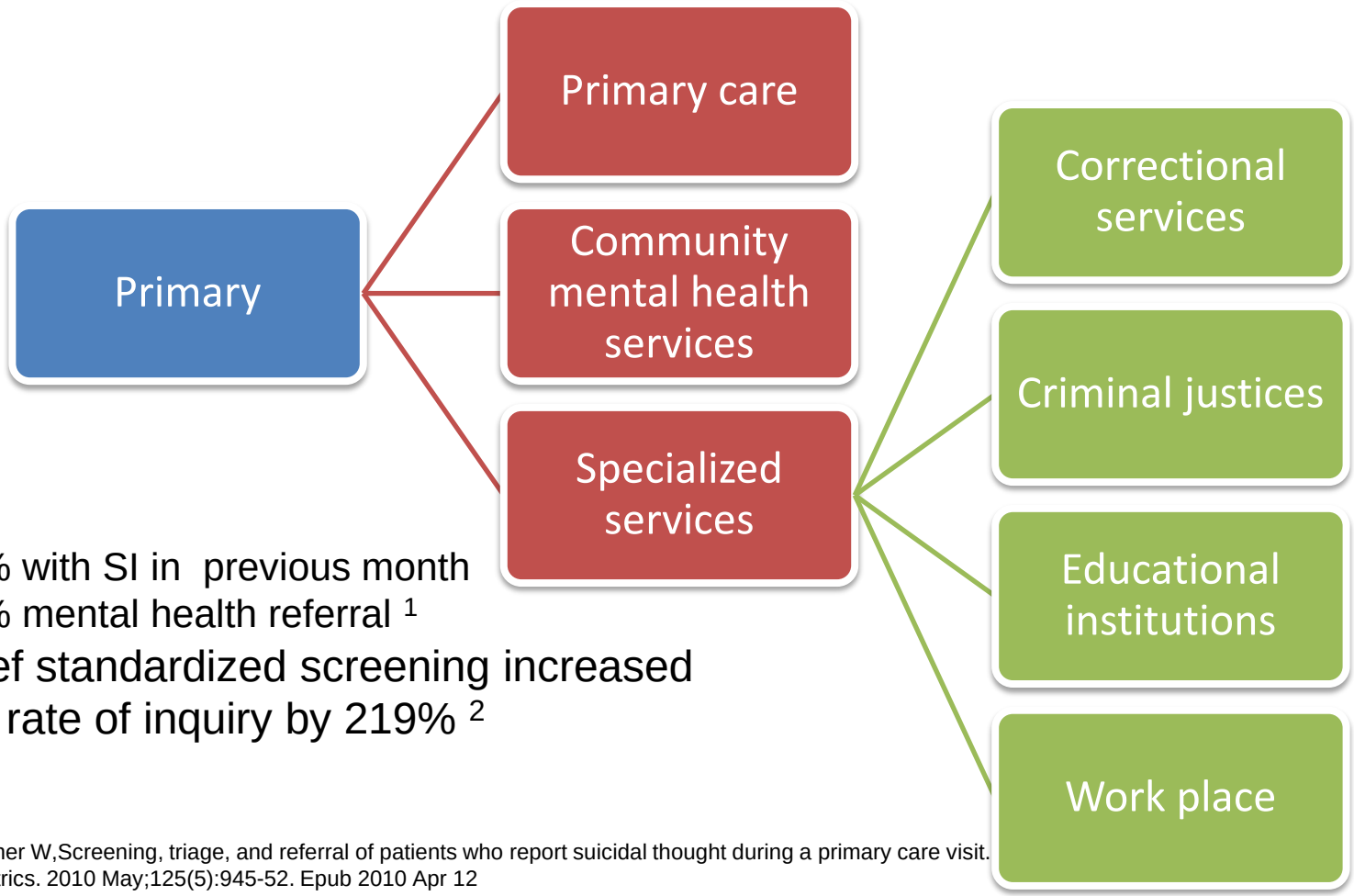
Risk assessment quality Possible scenario	Intervention & monitoring	Outcome
1. High quality risk assessment	High quality management and monitoring	Still client attempts or commits
2. High quality assessment	Resource constrains, inadequate management	Incident
3. Poor risk assessment	Intervention and monitoring was inadequate	Incident


Suicide
Those who contact the services
Those who do NOT contact the services

Mental health services - Settings



The first contact

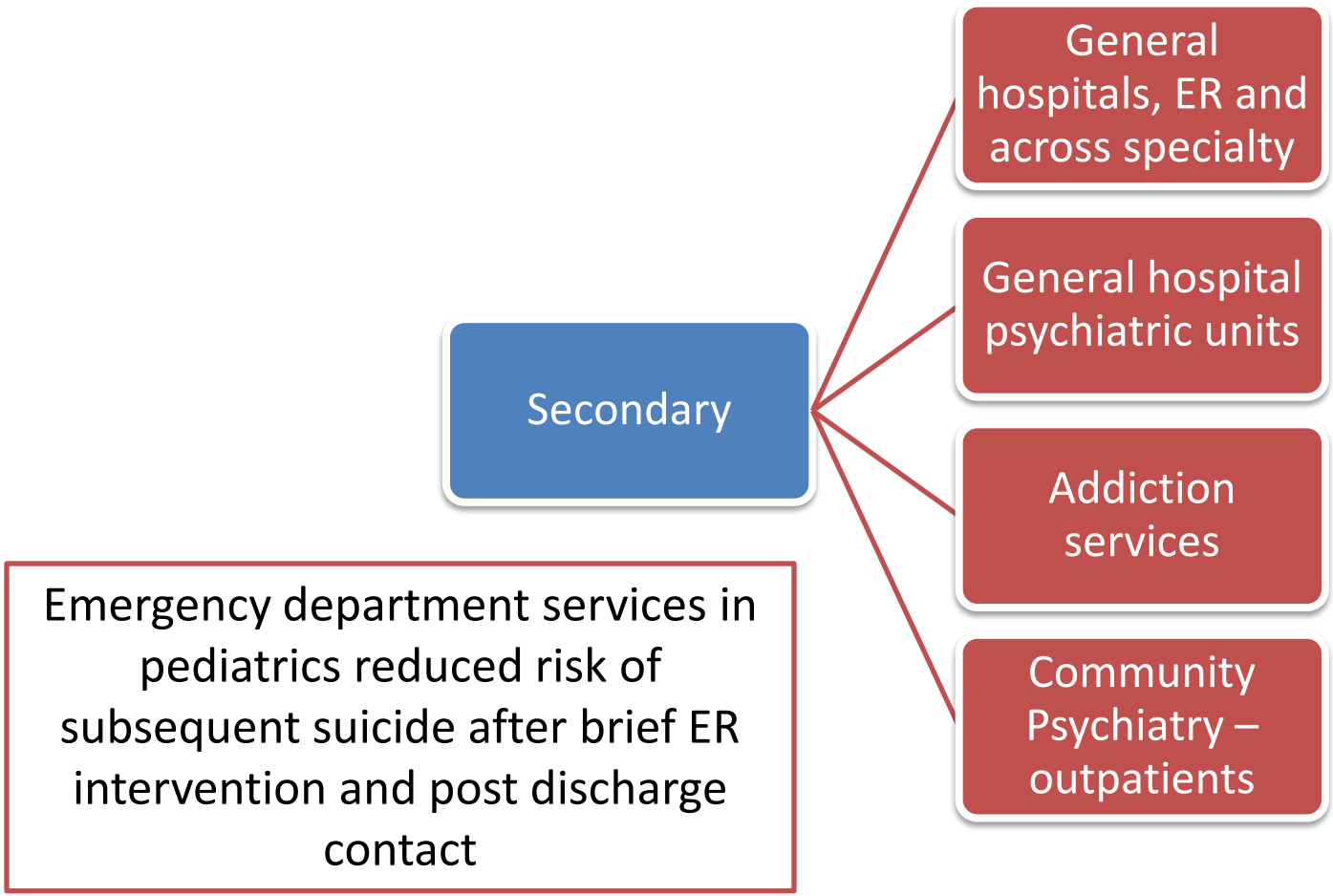


14% with SI in previous month
65% mental health referral [1]

Brief standardized screening increased the rate of inquiry by 219% [2]

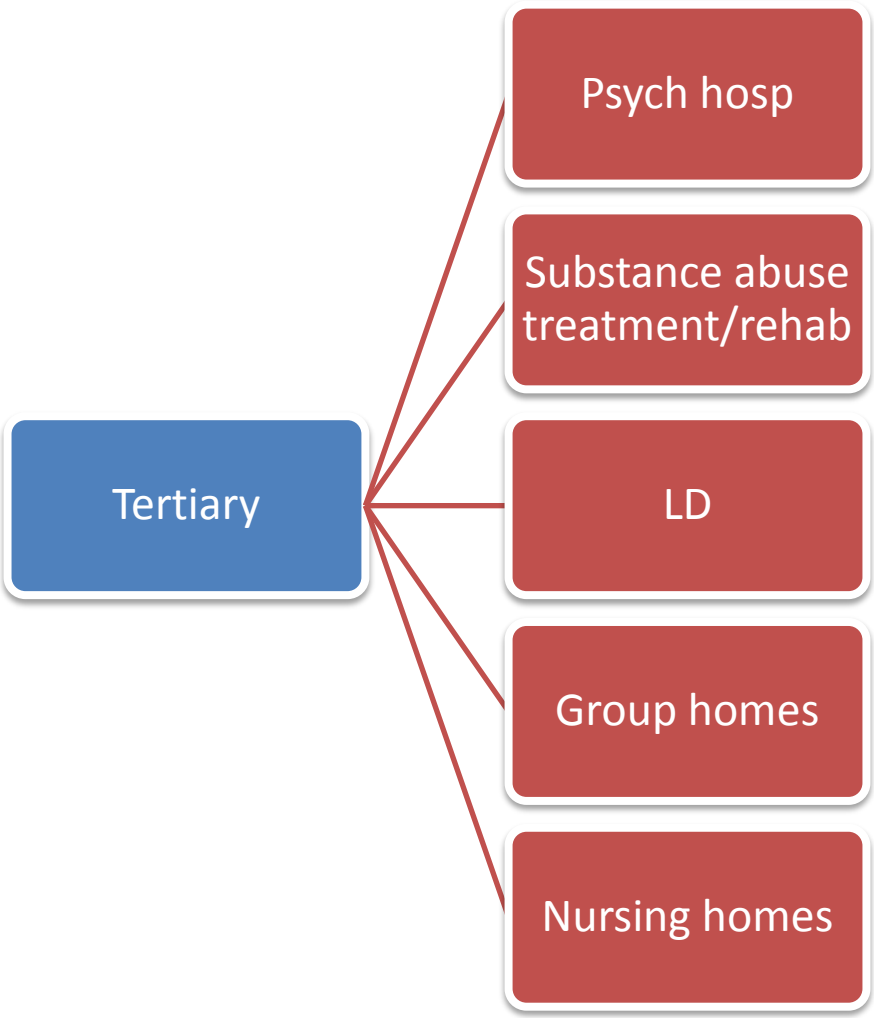
1.Gardner W,Screening, triage, and referral of patients who report suicidal thought during a primary care visit. , Pediatrics. 2010 May;125(5):945-52. Epub 2010 Apr 12

2.Wintersteen MB.Standardized screening for suicidal adolescents in primary care. Pediatrics. 2010 May;125(5):938-44. Epub 2010 Apr 12.



Emergency department services in pediatrics reduced risk of subsequent suicide after brief ER intervention and post discharge contact

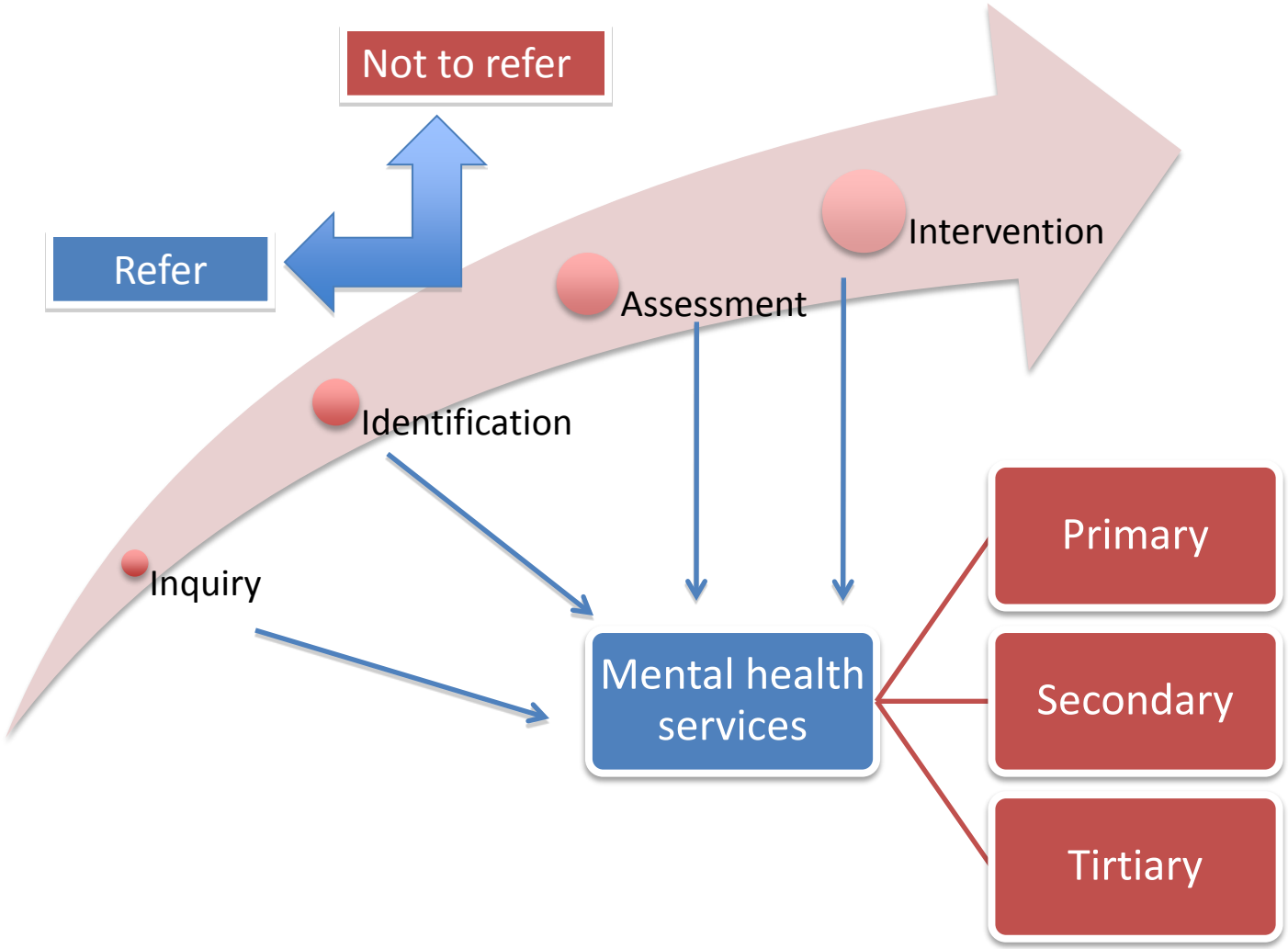
Newton AS,Pediatric Suicide-Related Presentations: A Systematic Review of Mental Health Care in the Emergency Department. Ann Emerg Med. 2010 Apr 8.


Tertiary
Psych hosp
Substance abuse treatment/rehab
LD
Group homes
Nursing homes

Special populations

- Suicide is no longer limited to mental health settings
- Special high-risk populations are clearly becoming newer challenges in the task of suicide prevention
- Some of the high-risk groups are:
- Teen age, post-partum, old age, substance abuse, chronic medical illness, trauma & disaster, emotional & sexual abuse, mental disorders.

Suicide prevention



Common need in all settings

- Identification
- ***Assessment***
- Intervention
- Prevention

Risk assessment across treatment settings

- Rising incidence of suicide attempts have been observed in a wide variety of clinical & social settings e.g. schools, universities, prisons, correctional facilities & health services.

- To provide effective intervention & prevention, we require adequate tools and skills for assessment which can be effectively applied by a range of professionals.

- There is a serious lack of skilled professionals with adequate knowledge & expertise in most of the social & non-psychiatric settings.

Risk factors are ‘additive’ & ‘synergetic’

Risk factors are typically additive (i.e., the patient's level of risk increases with the number of risk factors), they may also interact in a synergistic fashion.

- For example, the combined risk associated with comorbid depression and physical illness may be greater than the sum of the risk associated with each in isolation.

Weighting of risk factors in suicide prediction it is impossible to accurately predict suicide.

Statistical models may be valuable in the epidemiological and research arenas

Suggest clinically important risk factors that, if identified, are potentially amenable to treatment.

However, given the low base rates of suicide in the population, accurate prediction of suicide remains impossible,

Consequently, the psychiatric assessment, in combination with clinical judgment, is still the best tool for assessing suicide risk.

Rating scales for risk

- The Scale for Suicide Ideation (8)
- The Suicide Behavior Questionnaire (SBQ)
- The Suicide Intent Scale (9)
- Reasons for Living Inventory
- Risk-Rescue Rating,
- Suicide Assessment Scale,
- Thematic Apperception Test
- General Health Questionnaire
- Shneidman (745) psychological pain assessment
- Beck Hopelessness Scale
- Hamilton Depression Rating Scale
- Beck Depression Inventory.

Rating scales

- Because of their
  - high rates of false positive and
  - false negative findings and
  - their low positive predictive values,
  - these rating scales cannot be recommended for use in clinical practice in estimating suicide risk.

A recent evaluation concluded:

"no single instrument was able to accurately predict suicide risk without a significant amount of error" (Bisconer & Gross, 2007).

Qualities of appropriate and reasonable assessment tools

An important part is developing assessment instruments which can successfully differentiate between individuals at serious risk and those who are not.

High validity culture free	Specific, sensitive reliable
Used by all mental health professionals	success in predictability
Applicable Across medical setting	free from bias
minimum false negative false positive	Conceptually Incorporates available research evidence

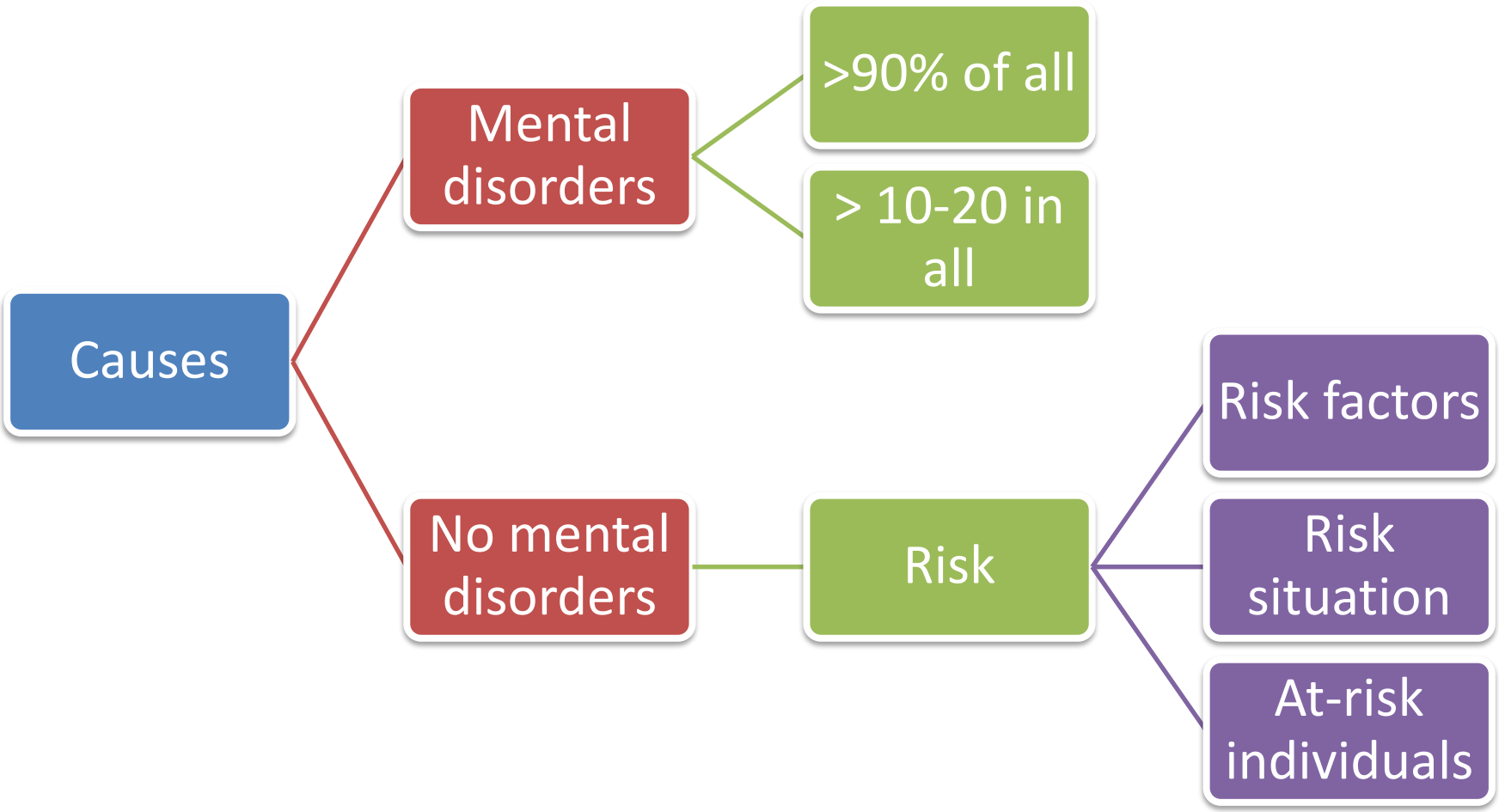
guide for treatment and care planning and appropriate clinical decision

Ducher JL, Dalery J.
[Correlations between Beck's suicidal ideation scale, suicidal risk assessment scale RSD and Hamilton's depression rating scale]
Encephale. 2008 Apr;34(2):132

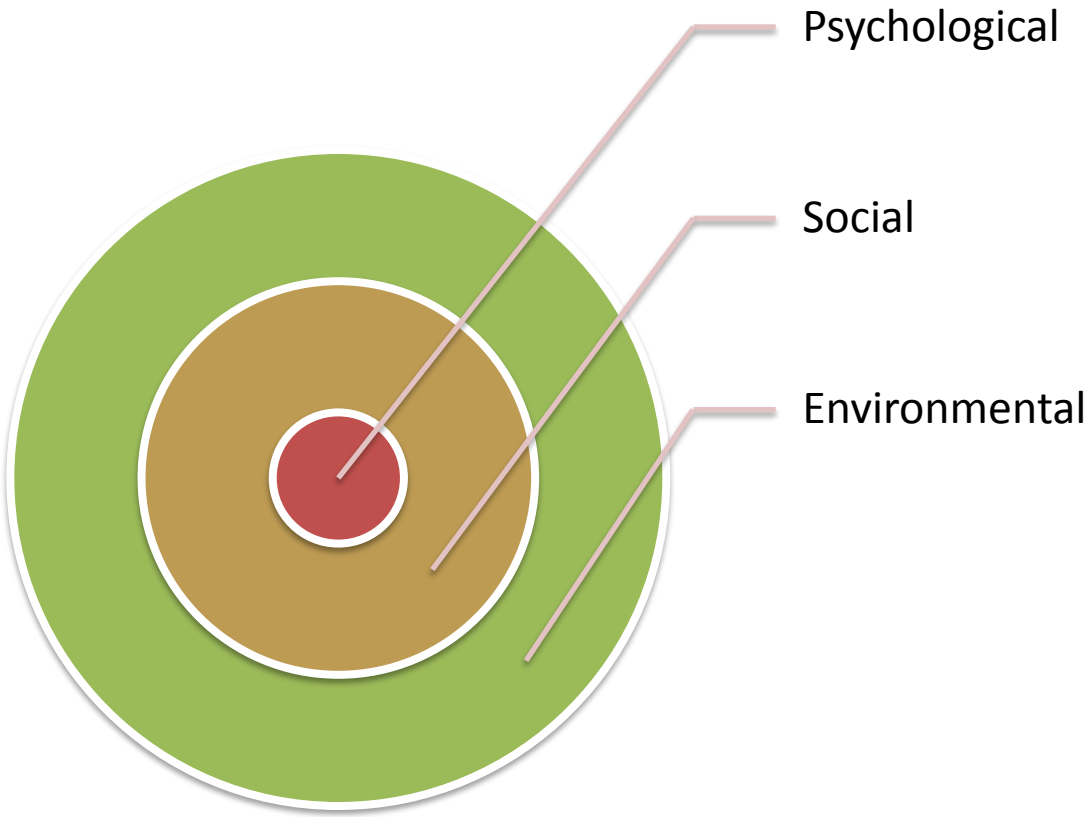
PROTECTIVE FACTORS

- Children in the home, except among those with postpartum psychosis
- Pregnancy
- Deterrent religious beliefs
- Life satisfaction
- Reality testing ability
- Positive coping skills
- Positive social support
- Positive therapeutic relationship

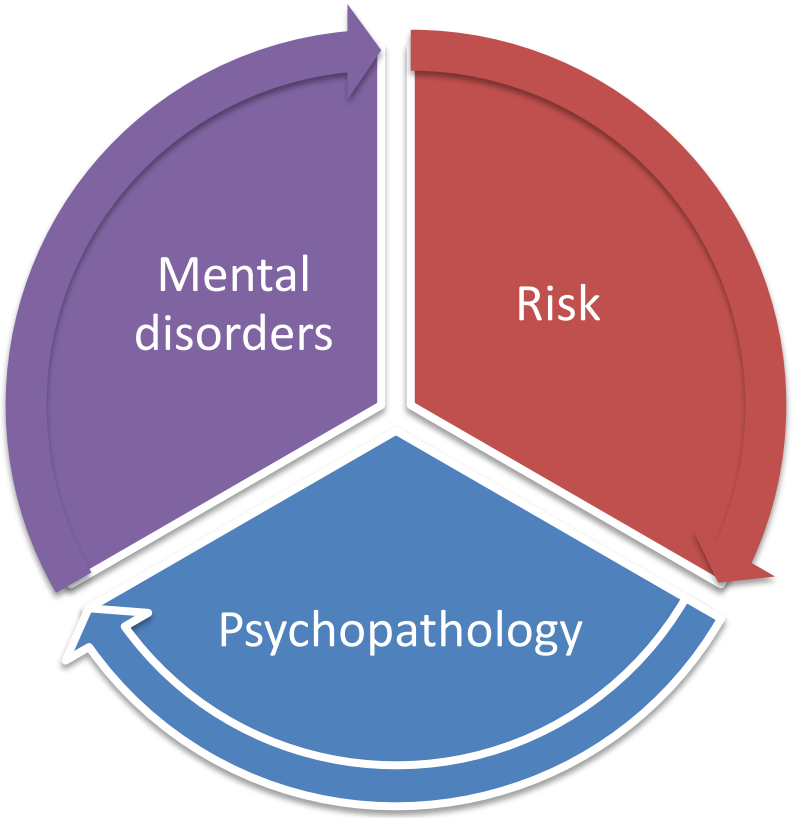
Need for paradigm shift in understanding the causes



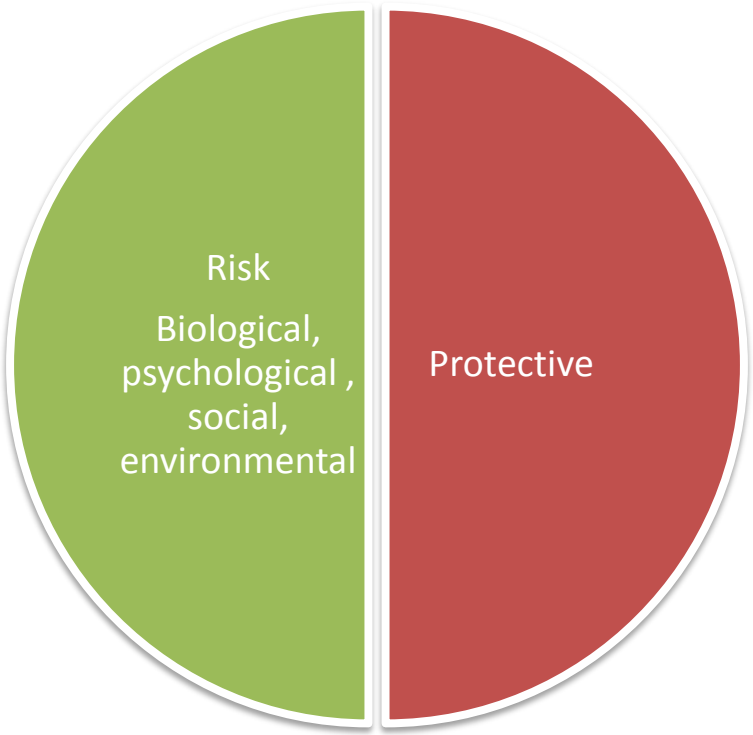
Risk for suicide in NO mental disorder group



What is to be assessed



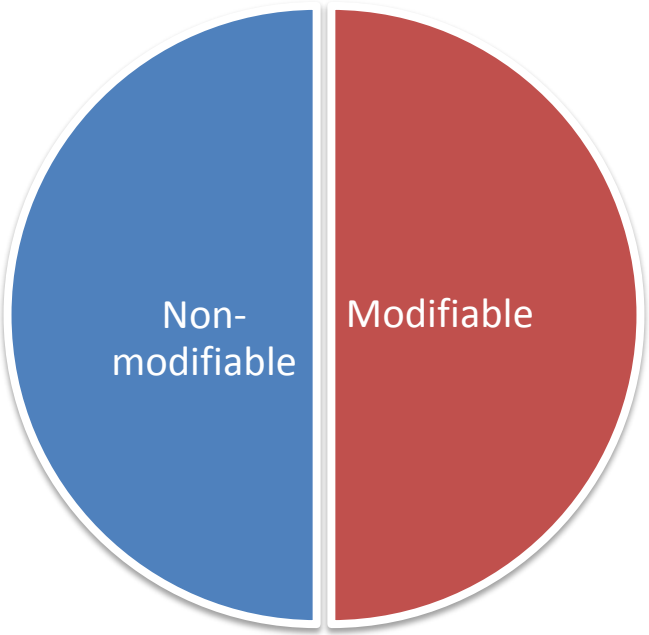
Formulation of risk



Estimation of Suicide Risk

the ‘factors are not the focus of treatment’

- Past history,
- family history, and demographic characteristics
- Abuse
- trauma
- Financial difficulties or unemployment can also be difficult to modify,
- at least in the short term. .



- Psychological
- Mental illness dimensions.

- Stress experience
- Self-esteem
- Frustation tolerence
- Impulsivity
- Symptoms of mental illness
- Depression-hopelessness

Psychopathology across mental disorders

- Impulsivity
- Depression-hopelessness
- Low frustration tolerance
- Cluster B traits

Conceptual framework

- Concept of risk has been questioned for a long time.
- It appears that it is a continuously evolving process.
- Suicide is a multidimensional concomitant of psychiatric diagnoses; especially mood disorders, and is complex in both its causation and in the treatment of those at risk.
- Risk and protective factors tend to be fairly consistent worldwide, with some cultural variation.

12. Maris RW.Suicide. Lancet. 2002 Jul 27;360(9329):319-26.Lancet. 2004 Oct 9-15;364(9442):1313.

Conceptual framework

- Concept of risk has been questioned.
- Continuously evolving process.
- Suicide is multidimensional. Multifactorial
- Risk and protective factors tend to be fairly consistent worldwide, cultural variation).
- An electronic search about risk factor elicited total 76 factors

- Classifiable into:
  - Biological,
  - Social,
  - Psychological,
  - Environmental,
  - Psychiatric,
  - Medical,
  - Cultural,
  - Spiritual and
  - Familial domains.

Factors Associated With an Increased Risk for Suicide

Suicidal thoughts/behaviors

- Suicidal ideas (current or previous)
- Suicidal plans (current or previous)
- Suicide attempts (including aborted or interrupted attempts)
- Lethality of suicidal plans or attempts
- Suicidal intent

Psychiatric diagnoses

- Major depressive disorder
- Bipolar disorder (primarily in depressive or mixed episodes)
- Schizophrenia
- Anorexia nervosa
- Alcohol use disorder
- Other substance use disorders
- Cluster B personality disorders (particularly borderline personality disorder)
- Comorbidity of axis I and/or axis II disorders

Physical illnesses

- Diseases of the nervous system
- Multiple sclerosis
- Huntington's disease
- Brain and spinal cord injury
- Seizure disorders
- Malignant neoplasms
- HIV/AIDS
- Peptic ulcer disease
- Chronic obstructive pulmonary disease, especially in men
- Chronic hemodialysis-treated renal failure
- Systemic lupus erythematosus
- Pain syndromes
- Functional impairment

Psychosocial features

- Recent lack of social support (including living alone)
- Unemployment
- Drop in socioeconomic status
- Poor relationship with familya
- Domestic partner violenceb
- Recent stressful life event

Childhood traumas

- Sexual abuse
- Physical abuse
- Genetic and familial effects
- Family history of suicide (particularly in first-degree relatives)
- Family history of mental illness, including substance use disorders

Psychological features

- Hopelessness
- Psychic paina
- Severe or unremitting anxiety
- Panic attacks
- Shame or humiliationa
- Psychological turmoila
- Decreased self-esteema
- Extreme narcissistic vulnerabilitya
- Behavioral features
- Impulsiveness
- Aggression, including violence against others
- Agitation

Cognitive features

- Loss of executive functionb
- Thought constriction (tunnel vision)
- Polarized thinking
- Closed-mindedness

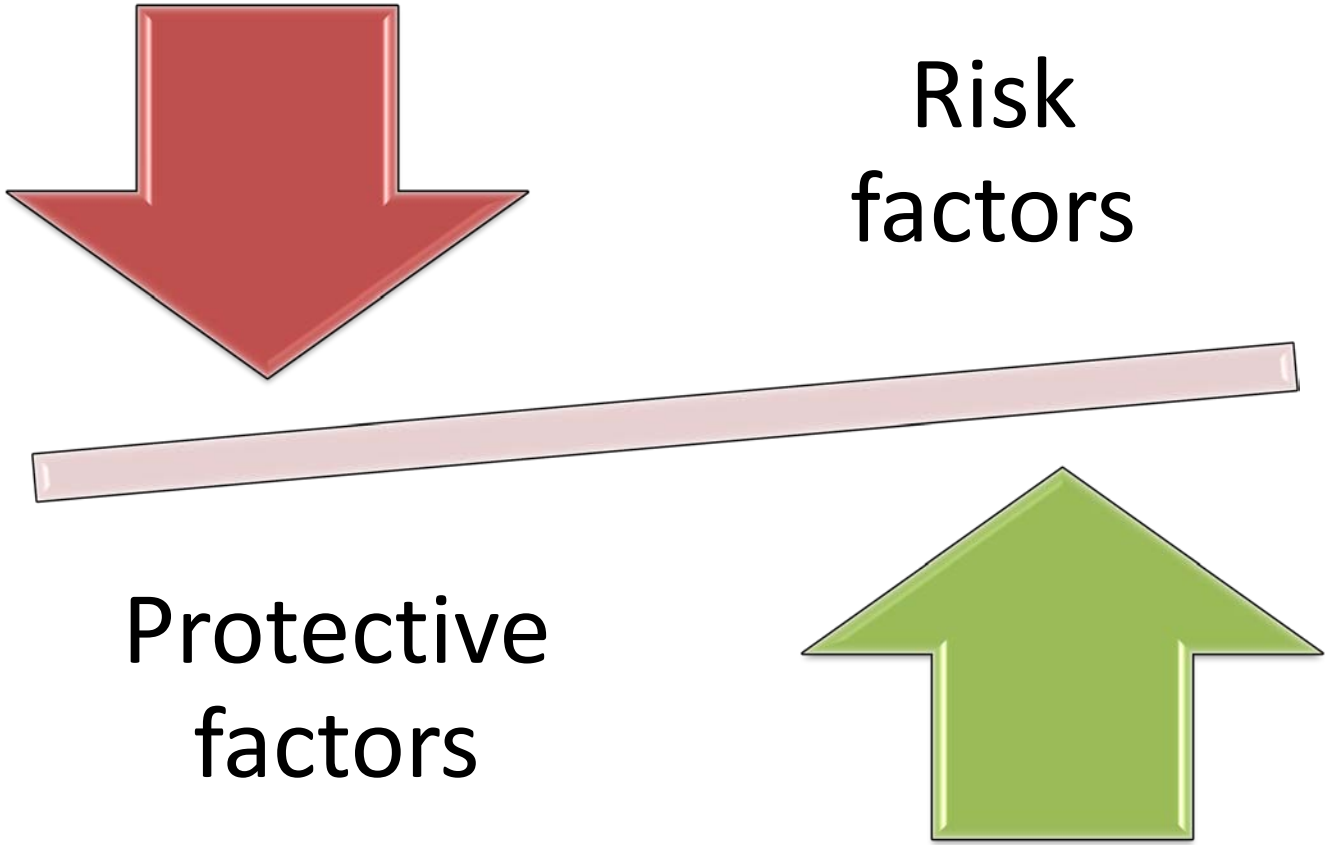
Demographic features

- Male genderc
- Widowed, divorced, or single marital status, particularly for men
- Elderly age group (age group with greatest proportionate risk for suicide)
- Adolescent and young adult age groups (age groups with highest numbers of suicides)
- White race
- Gay, lesbian, or bisexual orientationb

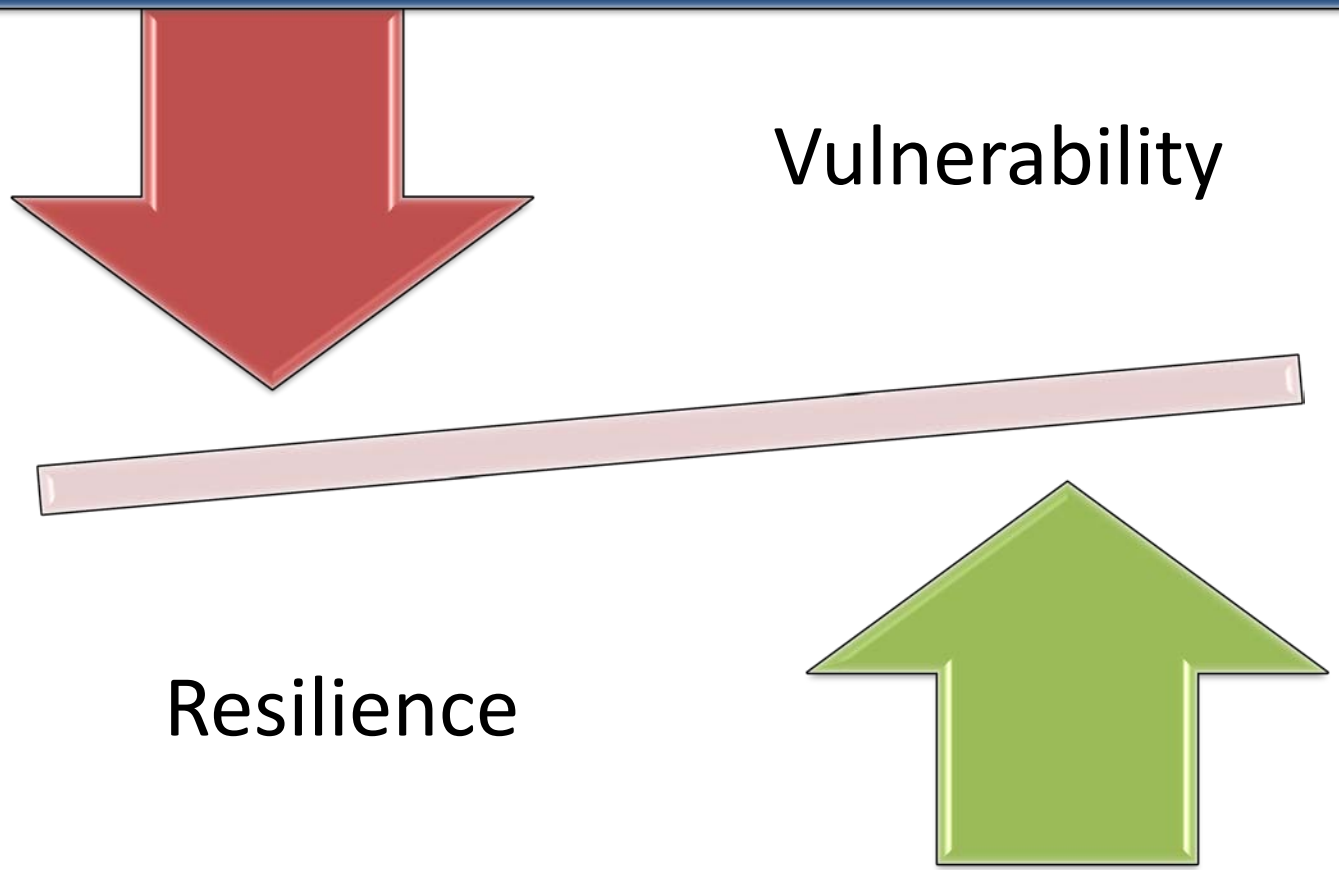
Additional features

- Access to firearms
- Substance intoxication (in the absence of a formal substance use disorder diagnosis) Unstable or poor therapeutic relationshipa

Risk- Vulnerability Spectrum
Its Not a dichotomy

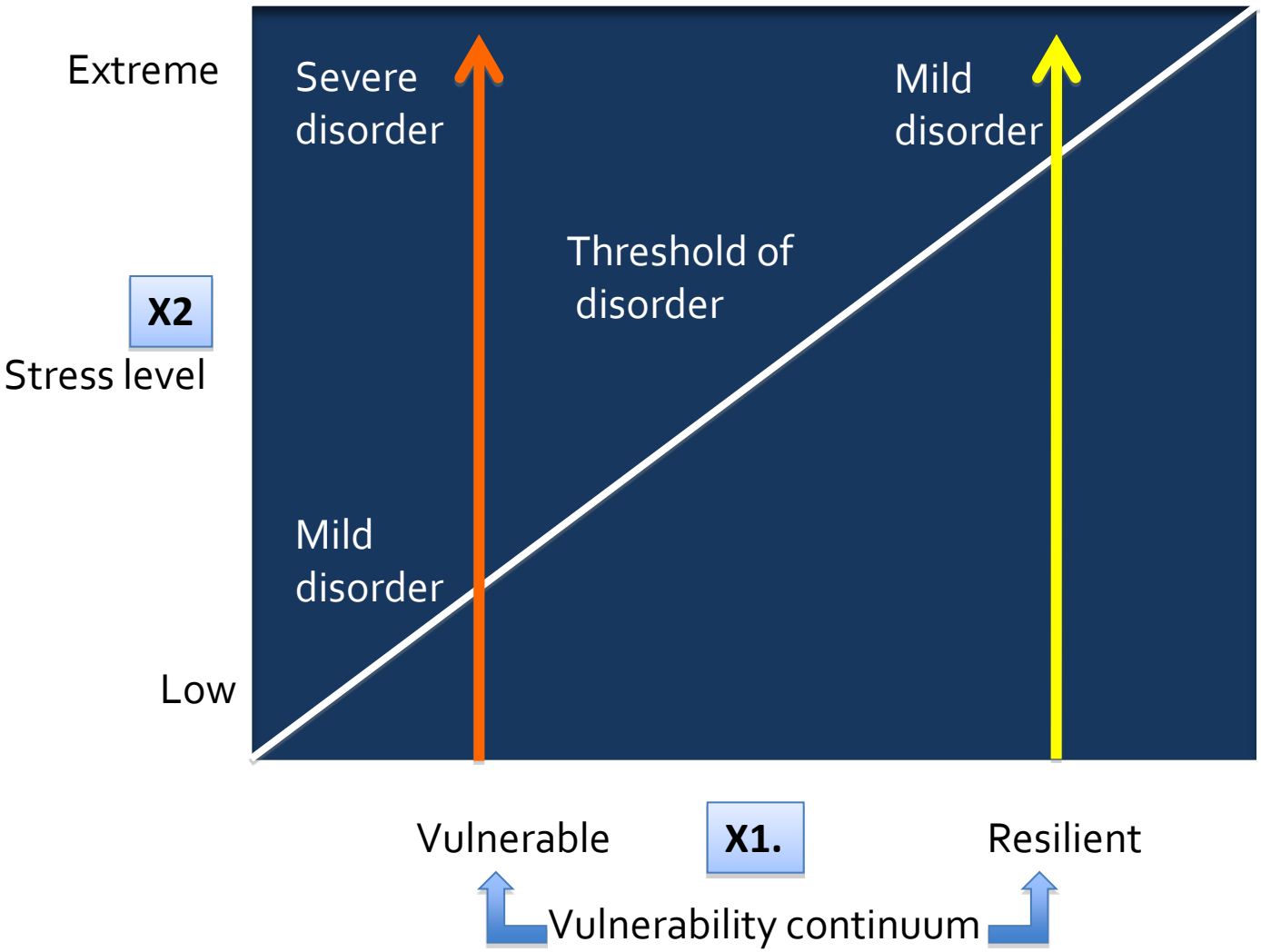


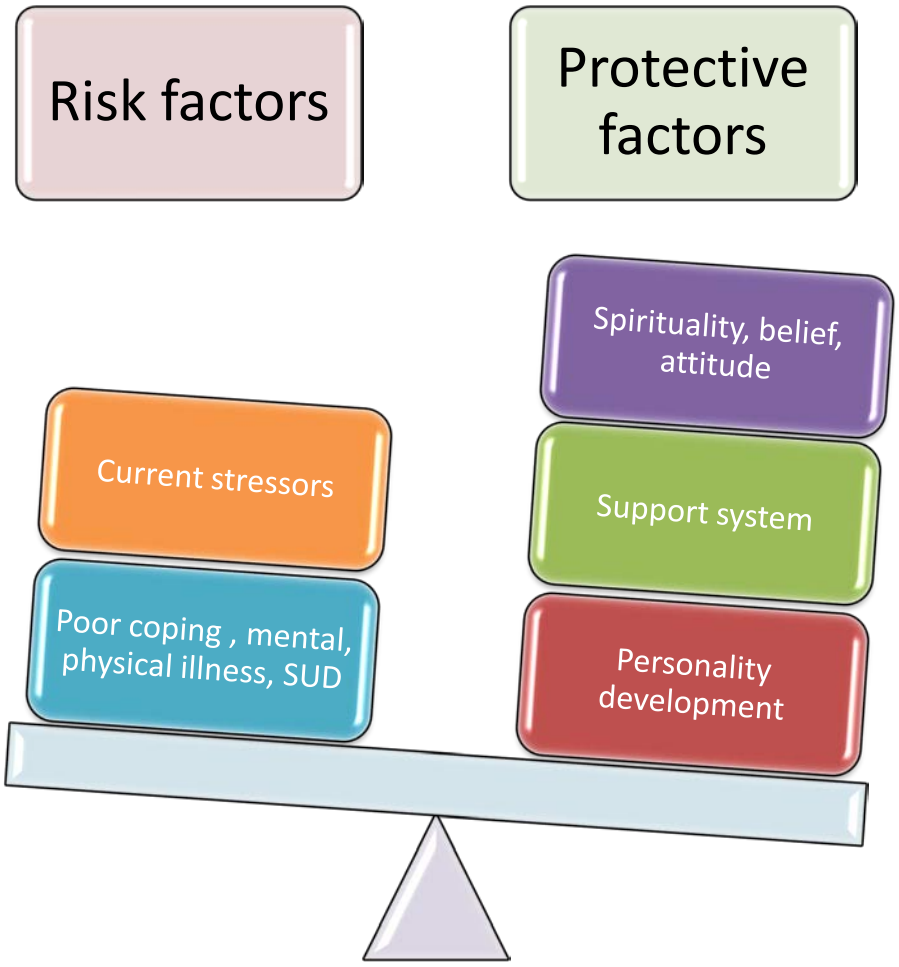
Risk is measured in relation to strength

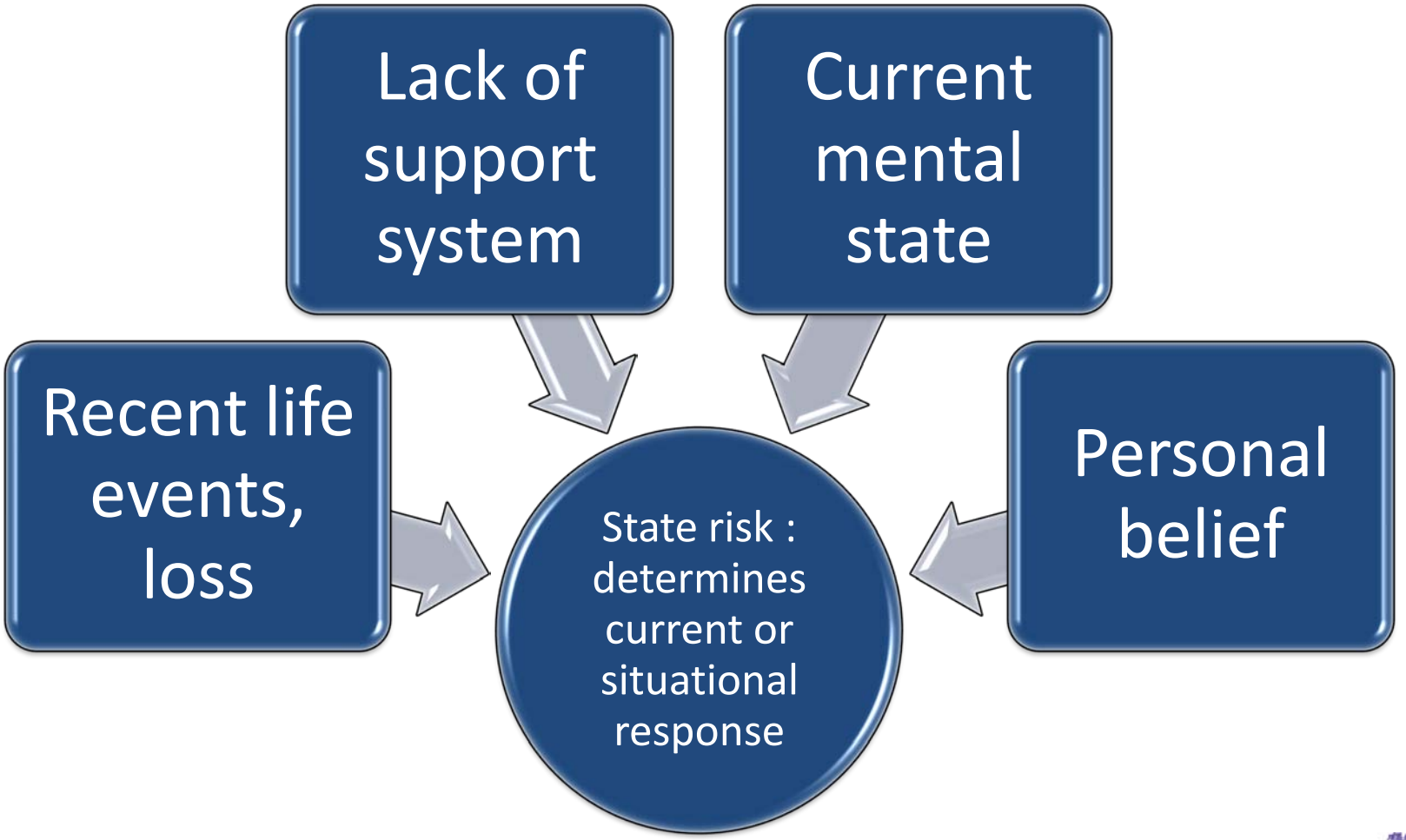


Western

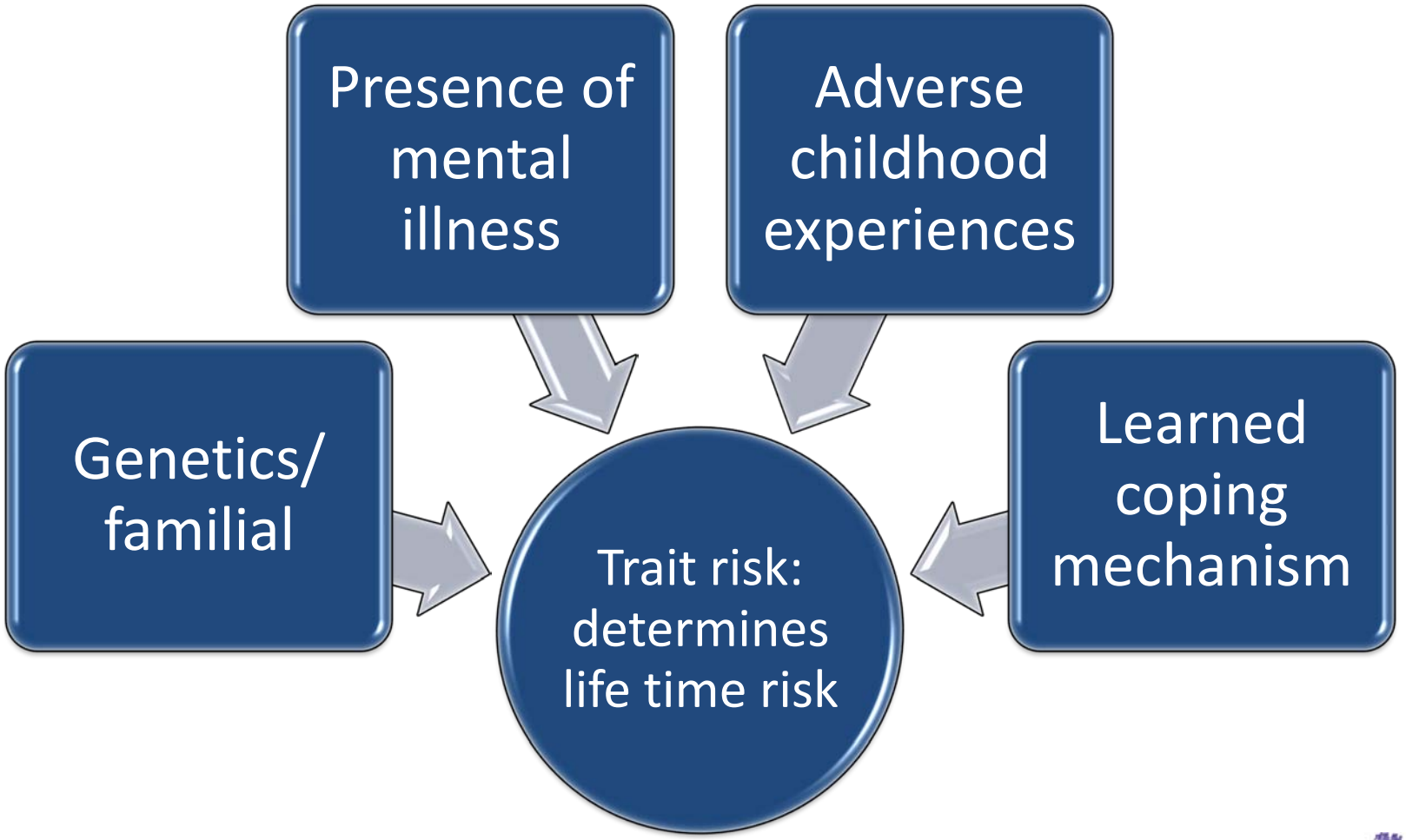
Stress-diathesis model forms the theoretical context of Risk-Vulnerability hypothesis




Risk factors
Protective factors
Spirituality, belief, attitude
Current stressors
Support system
Poor coping , mental, physical illness, SUD
Personality development

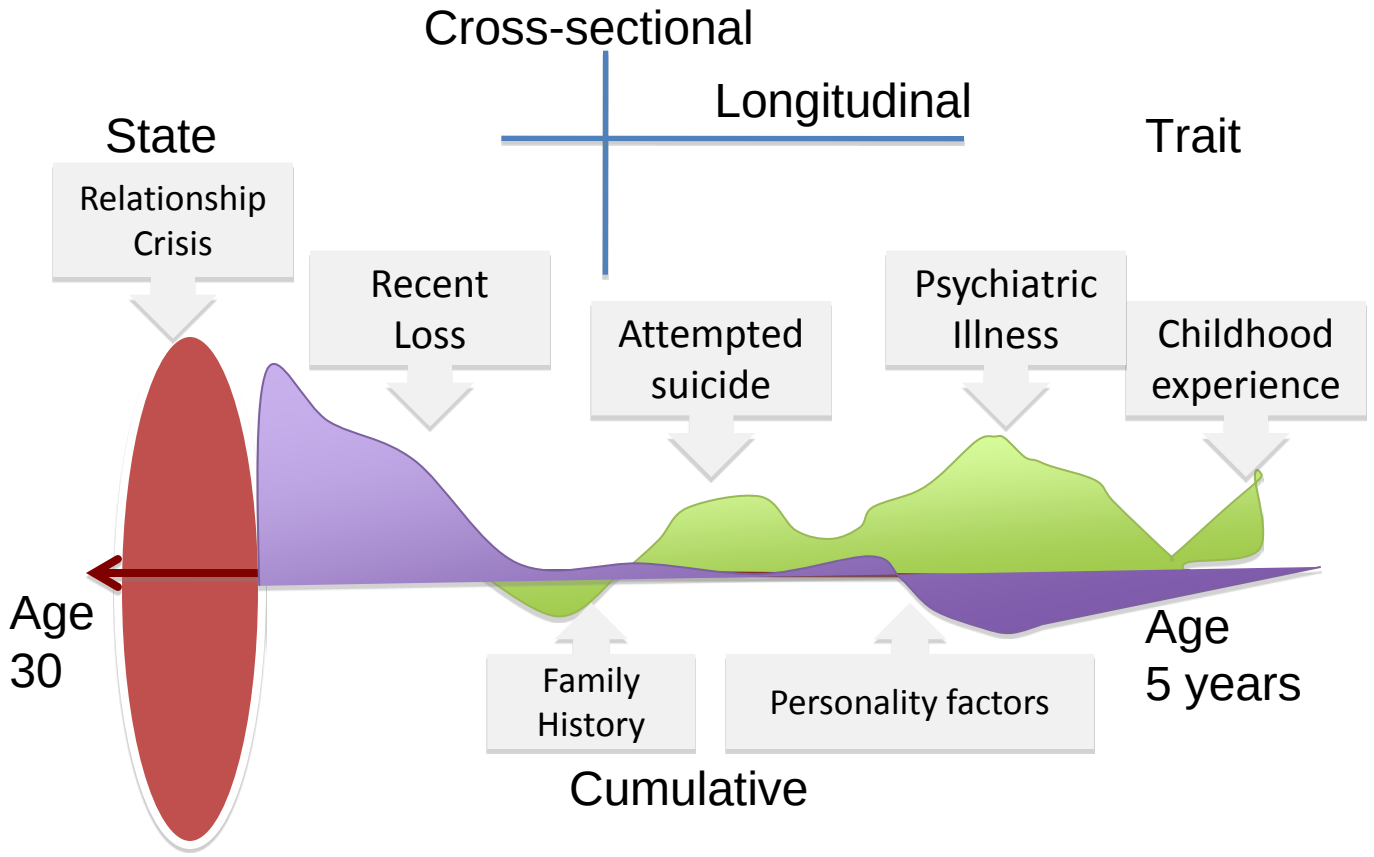

Lack of support system
Current mental state
Recent life events, loss
Personal belief
State risk : determines current or situational response

Western


Presence of mental illness
Adverse childhood experiences
Genetics/ familial
Trait risk: determines life time risk
Learned coping mechanism

Western

Quantifying Risk (cumulative)



State & Trait Risk

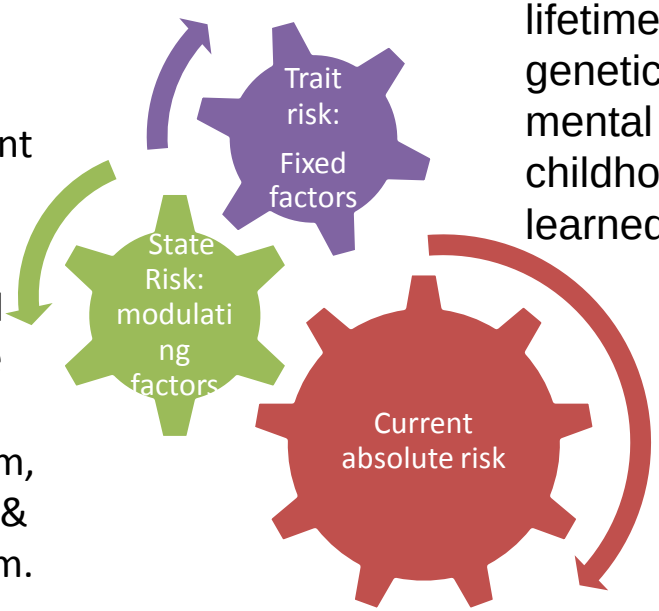
Trait risk:

with which an individual is born and develops limitations in coping mechanism. Trait factors determine lifetime risks arising from genetics-familial, presence of mental illness, adverse childhood experience & learned coping mechanism.

State risk:

which an individual goes through due to current life situation.

State risk determines current or situational response in presence of recent life events, lack of support system, current mental state & personal belief system.



Hypothesis

A net sum of risk shall be the quantum of risk factors in relation to risk protectors in a given individual at a given situation.

Based upon these understanding a new scale has been developed named SIS-MAP.

Western

Design of present scale assessment in 5 Domains (A) and 8 dimensions (B)

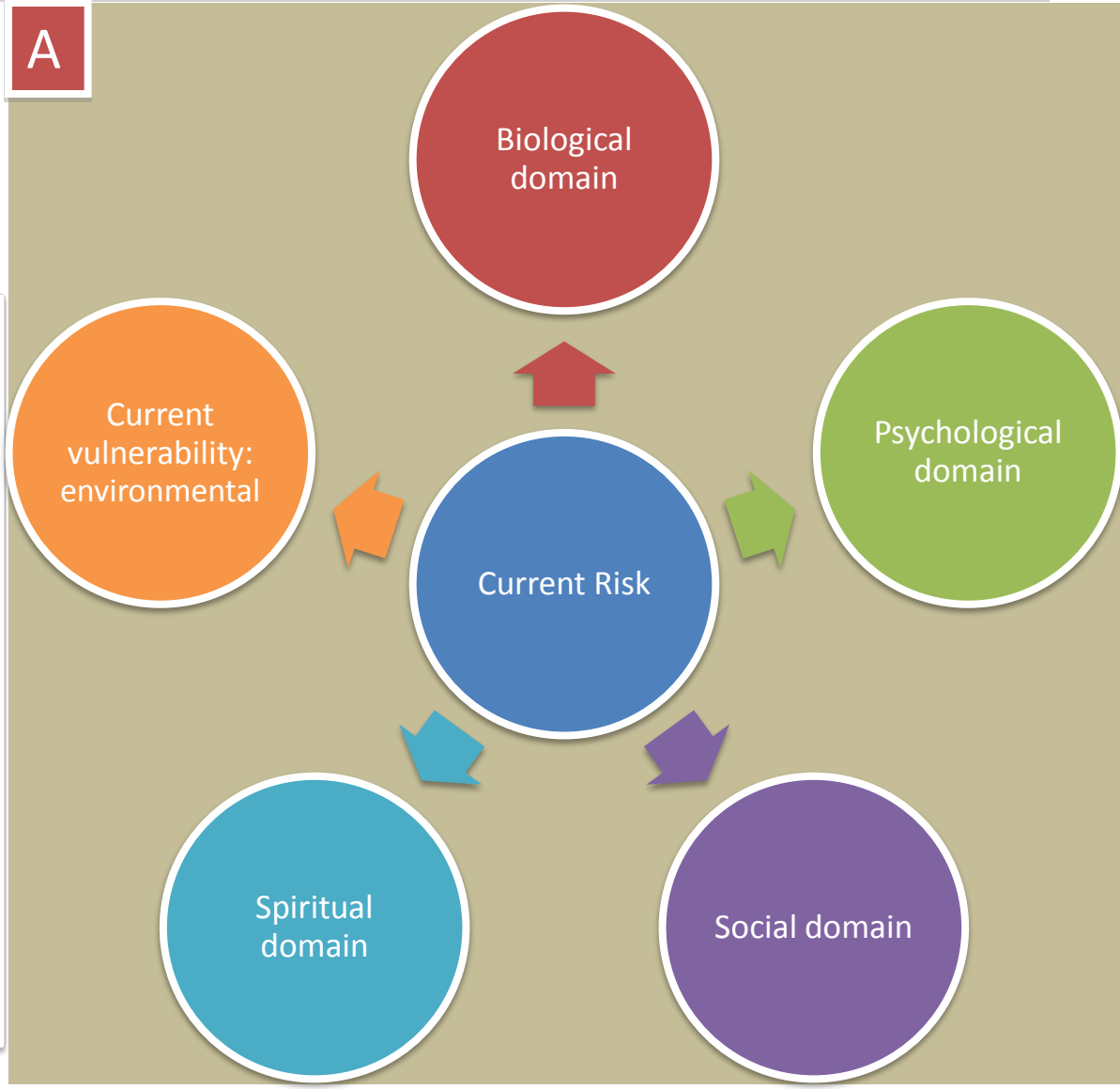
B

Comprehensive, global, biopsychosocial assessment

Current risk level

- 1. . Demographics
- 2. Biological
- **3. Psychological Domain**
- **4. Clinician ratings/observations**
- 5. Primacy/Recency
- 6. Family History
- 7. AXIS IV: Psychosocial and Environmental Problems
- 8. Protective factors

A



Casebook#: _____

Scale for Impact of Suicidality - Management, Assessment and Planning of Care (SIS-MAP)

NAME: _____

A. Srivastava, M.D. & C. Nelson, Ph.D. (2008) *

DATE: _____

1. Demographics

			Score
Age in years:	_____	*Score 1 for ages 15-25 or 70+ years* →	_____
Gender:	_____	*Score 1 for male* →	_____
Marital status:	_____	*Score 1 for recent widow/widower* →	_____
Number of children living with you:	_____	*Score 1 for single parenting* →	_____
Inpatient or outpatient (circle)	_____	*Score 1 for inpatient* →	_____

Subtotal for Demographics section 1: _____

2. Psychological Domain

Ideation:

		Item Scores ***(right column = 1)***		
		0		***1***
I.	Do you feel that life isn't worth living?	No ☐	Yes	☐
	Do you think you would be better off dead?	No ☐	Yes	☐
	Do you get ideas to hurt yourself?	No ☐	Yes	☐
	Are you facing any 'situation' in which you might hurt yourself?	No ☐	Yes	☐
	Do you feel you are vulnerable to hurting yourself?	No ☐	Yes	☐
	Have you been thinking of hurting yourself recently?	No ☐	Yes	☐
	Currently, do you think that dying might be a better option?	No ☐	Yes	☐
	Have you recently attempted to hurt yourself? (i.e. within last 7 days)	No ☐	Yes	☐
	Do you often hurt yourself by cutting or overdose of pills?	No ☐	Yes	☐
	Do you get suicidal ideas?	No ☐	Yes	☐

Subtotal for section 2I: _____
(right column = 1)

Management of ideation:

M. How often do you get these thoughts?	*Score1 for rarely, 2 for occasionally* →				____
How intense are these thoughts?	*Score 1 for low, 2 moderate, 3 high* →				____
Can you control these thoughts?		Yes	☐	No	☐
Can you cope with distressing thoughts of suicide?		Yes	☐	No	☐
Do you wish to be killed?		No	☐	Yes	☐
Do you wish to die?		No	☐	Yes	☐
Do you fear losing control and attempting suicide?		No	☐	Yes	☐
Are you uncertain about the nature of your suicidal thoughts?		No	☐	Yes	☐
Do you believe in communicating about your suicidal thoughts to others?		Yes	☐	No	☐
Do you believe in seeking help for suicidal thoughts?		Yes	☐	No	☐
	Subtotal for section 2M: ***(right column = 1)***				

Assessment of current state of suicidality (consider current thought processes and/or recent attempt)

A. Do you currently feel suicidal?	No	☐	Yes	☐
Do you feel hopeless?	No	☐	Yes	☐
Do you feel helpless?	No	☐	Yes	☐
Do you feel worthless?	No	☐	Yes	☐
Do you feel sad or depressed?	No	☐	Yes	☐
Do you feel any guilt?	No	☐	Yes	☐

Casebook#: _____

Psychological Domain, continued

Have you attempted to kill yourself?	***If no, skip to question P…***	No ☐	Yes ☐
Did you want to die[1]?		No ☐	Yes ☐
Were you certain that you wanted to die?		No ☐	Yes ☐
Did you want attention from someone?		No ☐	Yes ☐
At the time of your attempt, were you depressed?		No ☐	Yes ☐
At the time of your attempt, were you angry with yourself?		No ☐	Yes ☐
Do you want to attempt again?		No ☐	Yes ☐
Was the method damaging to your body? *(specify)*_____		No ☐	Yes ☐
Do you regret it?		Yes ☐	No ☐
Did you speak to someone before making the attempt?		Yes ☐	No ☐
Did you inform anyone afterwards?		Yes ☐	No ☐
Did you leave a suicide note?		No ☐	Yes ☐
Are you still stressed about it?		No ☐	Yes ☐
Are you feeling relieved?		Yes ☐	No ☐
Are you feeling safe in the hospital? (if applicable)		Yes ☐	No ☐
Do you feel safe in your house?		Yes ☐	No ☐
Do you feel guilt or shame?		No ☐	Yes ☐
Was your attempt because of your mental illness?		No ☐	Yes ☐
Is it because of your social situation or due to psychological distress?		No ☐	Yes ☐
Who do you hold responsible for the attempt?	*Score 1 if client mentions family; score 1 if client says self; score 2 if client mentions both* →			____
Do you still have suicidal ideas?		No ☐	Yes ☐
Do you want to seek help?		Yes ☐	No ☐
Do you think you can deal with it yourself?		Yes ☐	No ☐

Subtotal for section 2A: _____

(right column = 1)

Planning for subsequent attempt:

P. Do you think you will get suicidal ideas in the future?	No	☐	Yes	☐
Will you be able to cope with these thoughts?	Yes	☐	No	☐
Do you think you will attempt suicide in the future?	No	☐	Yes	☐
Do you think you need treatment and help?	Yes	☐	No	☐
Do you think your illness needs treatment?	Yes	☐	No	☐

Subtotal for section 2P: _____

(right column = 1)

Subtotal of all Psychological Domain sections (2I, 2M, 2A, 2P): _____

3. Comorbidities (check all that apply)

Alcohol abuse or dependence	☐	History of	☐	Current
Drug abuse	☐	History of	☐	Current
Sexual abuse	☐	History of	☐	Current
Physical abuse	☐	History of	☐	Current
Emotional abuse/exploitation	☐	History of	☐	Current

Subtotal for Comorbidities section (count all check marks): _____

[1] Client should be instructed to answer these questions with reference to the most recent attempt.

Casebook#: _____

4. Family History (including siblings, parents, or grandparents)

Suicide attempt	(*family member*) _____	No ☐	Yes ☐
Death due to suicide	(*family member*) _____	No ☐	Yes ☐
Mental illness	(*family member*) _____	No ☐	Yes ☐
Addictions or alcoholism	(*family member*) _____	No ☐	Yes ☐

Subtotal for Family History (Score 1 for each Yes in this section): _____

5. Biological Domain

Do you currently have any psychiatric illness? (*specify*) _____	No ☐	Yes ☐
Do you have any chronic medical illnesses? (*specify*) _____	No ☐	Yes ☐
Do you suffer from frequent mood swings?	No ☐	Yes ☐
Do you think you are suffering from an 'undiagnosed psychological disorder' like anxiety, depression, psychosis, memory loss, lack of drive or motivation or getting easily stressed? ***if no, section is finished***	No ☐	Yes ☐
Do you think it is affecting your life in terms of functioning and day to day living?	No ☐	Yes ☐

Subtotal for this Biological Domain (Score 1 for each Yes in this section): _____

6. Protective factors for suicide risk

Do you benefit from community or outpatient support/counseling?	No	☐	Yes	☐
Is your family practically supportive of your problems and your recovery?	No	☐	Yes	☐
Does your faith or spirituality help you in dealing with your problems?	No	☐	Yes	☐
Do you have children that rely on you, and depend on your well-being?	No	☐	Yes	☐
Do you live in impoverished conditions? (difficulty paying for food and shelter)	Yes	☐	No	☐
Do you think you are worthy of living?	No	☐	Yes	☐
Do you have good self-esteem? (believe that you are a worthwhile person)	No	☐	Yes	☐
Have you succeeded when faced with similar life challenges?	No	☐	Yes	☐
Is your home environment safe and stable?	No	☐	Yes	☐
Do you savour life's satisfying moments?	No	☐	Yes	☐
Do you have additional reasons for not committing suicide? *(specify:)*	No	☐	Yes	☐

_____

Subtotal for Protective factors: _____

(right column = 1)

(right column = 1)

7. Clinical ratings/observations

Does client lack insight?	No	☐	Yes	☐
Is there evidence of a personality disorder or issues related to personality?	No	☐	Yes	☐
Is there presence of psychosis?	No	☐	Yes	☐
Is there evidence of impulsivity? (i.e. behavioral dyscontrol)	No	☐	Yes	☐
Would you consider client vulnerable due to any of the following?				
Personal crisis (i.e. extremely adverse situational event)	No	☐	Yes	☐
A dysfunctional or chaotic home environment	No	☐	Yes	☐
Recent childbirth or abortion	No	☐	Yes	☐
Existential issues (i.e. no meaning in life)	No	☐	Yes	☐

Casebook#: _____

For attempters only:

Was the method used capable of causing death? No ☐ Yes ☐

Was the attempt planned? No ☐ Yes ☐

Subtotal for Clinical ratings/observations (Score 1 for each Yes in this section): _____

8. Psychosocial and Environmental Problems[2]

Score 1 for every problem named in this section

Check:

__ Problems with primary support group (*specify):* _____

__ Problems related to the social environment (*specify):* _____

__ Educational problems (*specify):* _____

__ Occupational problems (*specify):* _____

__ Housing problems (*specify):* _____

__ Economic problems (*specify):* _____

__ Problems with access to health care services (*specify):* _____

__ Problems related to interaction with the legal system/crime (*specify):* _____

__ Other psychosocial and environmental problems (*specify):* _____

Subtotal for Psychosocial/Environmental (count all check marks): _____

SIS-MAP Clinical Profile:

I-MAP subscales

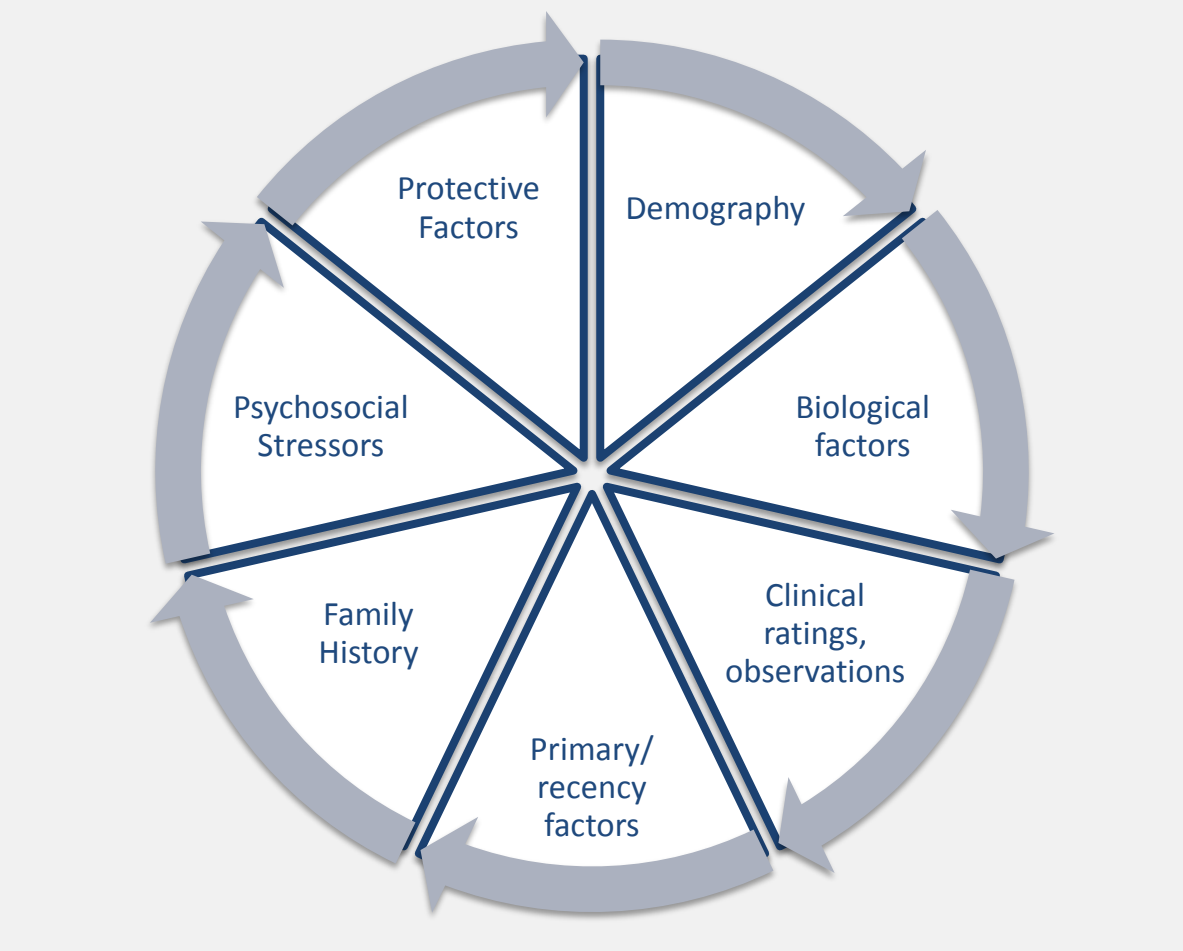
2I- Ideation:	
2M- Management	
***2A-* Assessment**	
2P- Planning	

Demographics:		
Psychological Domain:		
Comorbidities:		
Family History:		
Biological Domain:		
Clinical ratings/observations :		
Psychosocial/Environmental:		
Total of all above sections:		
Protective Factors: (subtract):	-	

SIS-MAP Risk Index: [3]

[3] The mean total scores on the SIS-MAP for individuals who were admitted ($M = 23$, $SD = 9$) vs. not admitted ($M = 33$, $SD = 14$) and their respective standard deviations were used to establish clinical cut-offs. Thus, it was determined that scores falling between 13 and 23 represent individuals who require outpatient follow-up but do not require admission (individuals who score less than 13 likely require no follow-up). Individuals who score above 33 on the SIS-MAP are at a serious risk of suicide and should be admitted to a psychiatric facility. Scores between 23 and 33 require clinical judgment to determine the level of care required.

Contents & measurements of the new scale



Psychometric Properties

- **Inter-rater reliability**
- **The inter-rater reliability of the scale was assessed by videotaping a case** vignette in which a therapist administers the structured interview to a mock client.
- The twenty clinicians rated: included registered nurses, social workers, occupational therapists, and psychometrists.
- SIS-MAP has shown an inter-rater reliability between 0.71 and 0.81 (x=. 76) N=20, p<. 001.
- In the field trial it has demonstrated a specificity of 78.1%, sensitivity of 66.7% and validity of correctly classifying 74%. On comparison with other popular scales SIS-MAP comes out as parallel on all parameters.

- Even with standardized assessment and prediction scales (such as the Hamilton or Beck depression inventories), suicide prediction results in about 30% false positives.[12]

Comparison of SIS-MAP to other suicide risk assessment scales

	SIS-MAP	SPS	**SPS-clinical scales**	ASIQ	BDI-II
Specificity	78.1%	65.9%	81.3%	71.4%	70.3%
Sensitivity	66.7%	58.3%	63.6%	64.0%	72.0%
Correctly Classified	74.0%	63.1%	74.1%	71.0%	68.7%

Results:

Correlations among Variables and Admission Status

- Whether individuals were admitted or not was correlated with various outcome measures.

Analyses demonstrated that admission status was correlated with subtotals in the protective domain (r = -.333, p <.05), suggesting that individuals with higher levels of resilience factors were less likely to be admitted, a key assumption of the SIS-MAP.

Additionally, the individual items of previous suicide attempts and the presence of psychosis were correlated with admission status (r = .368, p<.05, and r = .321, p<.05 respectively).

Classifying Individuals Using the SIS-MAP

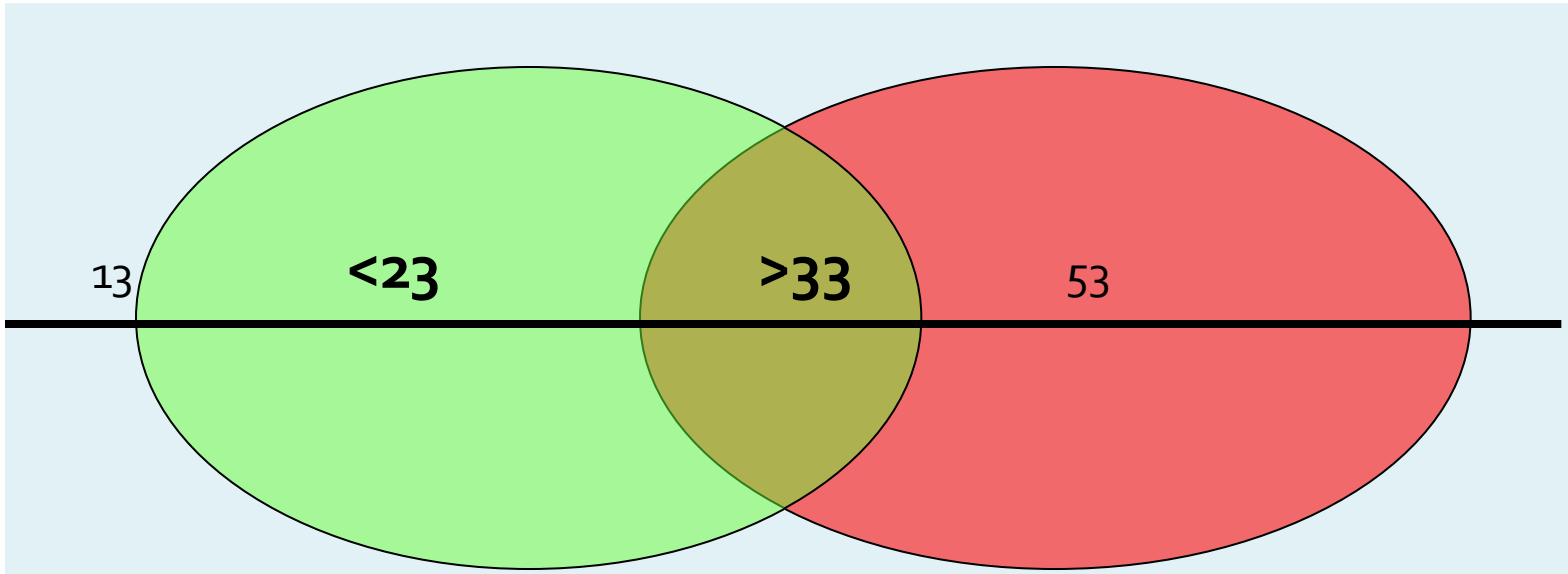
The specificity of the scale (correctly identifying individuals who did not require admission) was 78.1%

while the sensitivity of the scale (correctly identifying individuals who required admission) was 66.7%.

The false positive rate was 33.3% while 21.9% of cases resulted in a false negative.

SIS-MAP

Clinical Cut-Offs for Level of Care Needed



Scores 13-23 = outpatient follow-up highly recommended

Scores >33 = admit highly recommended

Scores 23-33 = consider psychosis, previous suicide attempts, and protective factors

SIS-MAP Subscale Predictions of Outcome

- Three stepwise regressions using scores on subscales to predict outcomes

- Outcomes:
  - Length of stay (number of inpatient days)
  - Readmission within 6 months (yes or no)
  - Suicide attempt within 6 months (yes or no)

Outcome: length of stay

- Only significant predictor was clinical subscale ($\beta = 2.62$, $p = .004$)

- Higher clinical ratings predict a longer inpatient stay

Outcome: readmission in 6 months

- Significant predictors were demographic subscale ($\beta = .294$, $p = .002$) and management of ideation subscale ($\beta = .068$, $p = .028$)

- Higher demographic risk and lower ability to manage ideation are associated with greater likelihood of readmission within 6 months

Outcome: suicide attempt within 6 months

- Only significant predictor was total score on psychological domain ($\beta = .034$, $p = .015$)

- Greater ideation, planning, and current suicidality and lower ability to manage these thoughts relate to a greater likelihood of a subsequent suicide attempt within 6 months

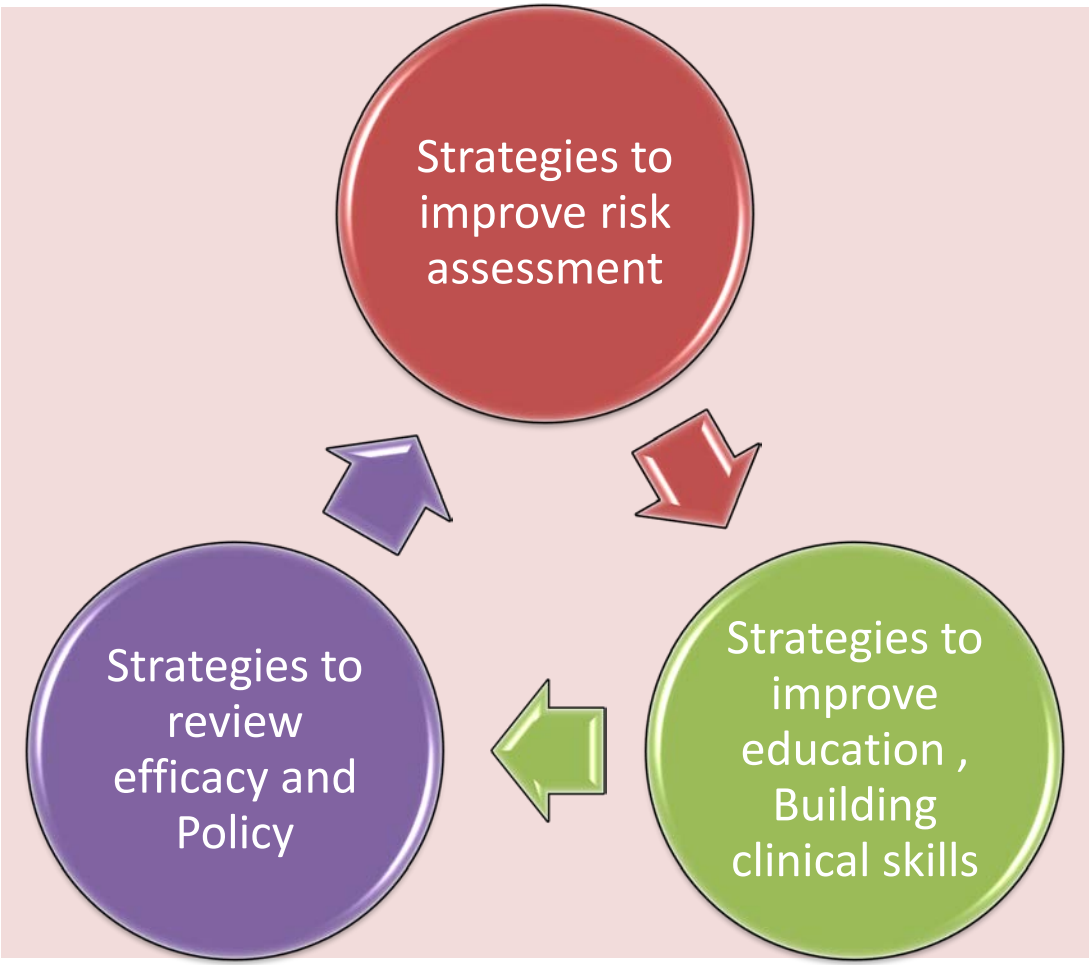
Strategies to improve quality of risk assessment: WHO Recommendations

1. Requires a public health approach.
2. The burden of suicide is so large that prevention could be considered the responsibility of an entire government, under the leadership of the health ministry.
3. Suicide-prevention programmes are needed and should consider specific interventions for different groups at risk
4. Health-care professionals, especially in the emergency services, should be trained in the effective identification of suicide risk and proactive collaboration with mental health services.
5. Both health professionals and the general public should be educated about suicide as early as possible, with a focus on both risk and protective factors.
6. Policy-oriented research on and evaluation of suicide prevention programmes is needed.
7. The mass media should be involved in suicide prevention via training, and use of the WHO guidance on media treatment of suicide

Recommendation for clinical governance

Continuing medical education

- Psychiatrists
- Mental health professionals
- Family physicians
- Law enforcement personnel
- Correctional officers



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Contact us for SISMAP