# SUICIDE PREVENTION FOR TWO DEMOGRAPHICS: ADOLESCENTS AND OLDER ADULTS

June 2019

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## INTRODUCTION

Between 5 to 8% of adolescents attempt suicide each year (Wyman et al., 2010). Yet, suicide among elderly persons happens at higher rates than younger people in many countries (Lapierre et al., 2011). **Prevention of suicide rates is therefore a public health challenge that needs to be addressed with interventions that show their effects, safety, and cost-effectiveness (Wei et al., 2015).** The articles in this review examine suicide prevention studies for adolescents and older adults. For each population of interest, the articles present both a systematic review and an analysis of specific programs. Wei, Y., Kutcher, S., & LeBlanc, J. C. (2015) denounce the absence of independent best evidence-based sources of information to help school leaders and administrators choose from the variety of marketed youth mental health programs. Using the Office of Justice Program What Works Repository (OJP-R) tool to apply critical evaluation techniques to assess said programs, they share their empirical review of two widely chosen suicide prevention program. Their systematic review shows that despite the popularity of the programs, no research shows evidence of their impact on preventing suicide. Wyman et al. (2010) look specifically at youth programs that modify socio-ecological factors, as social connectedness may reduce suicide risk through the well-established association between suicide behavior and adolescents' social ties and norms. **The authors of this study observe the effectiveness of a suicide prevention program that focuses on supporting protective factors through high school peer leaders trained to disseminate school-wide messages.**

Addressing the issue of suicide rates in older adults, Lapierre et al. (2011) conducted a systematic review of interventions for suicidal older adults to identify successful strategies as well as areas of need. While the programs they reviewed were found to be efficient, they were so mainly for women, and they did not all aim at improving protective factors. **The authors suggest that there is a need for future research exploring physician education, gatekeeper training, means restriction, and codes of conduct for media coverage as strategies to improve suicide prevention in older adults.** Kiosses et al. (2018) look more specifically at patients hospitalized with suicidality (suicidal ideation or attempt), for whom suicide rates are particularly elevated. They present the stages and techniques of a psychosocial intervention for cognitive reappraisal to reduce suicide risk in middle-aged and older adults recently hospitalized for suicidality and share a clinical case from their research. Finally, the last article examines the importance of suicide prevention in outpatient healthcare. Labouliere et al. (2018) explain how one commonality in those dying by or attempting suicide is their treatment in outpatient behavioral healthcare the year prior. They describe the Zero Suicide (ZS) model, a resource for providers to create a systematic approach to suicide prevention and its quality in healthcare. In this article, they present preliminary data of healthcare systems that have

implemented ZS and have witnessed a reduction in suicide deaths in the year after the intervention.

## ARTICLE 1: SYSTEMATIC REVIEW OF YOUTH PREVENTION PROGRAMS

### SUMMARY

Risk factors of suicide for adolescents are highly related to mental disorders with an onset prior to age 25. As a result, schools are constantly offered a large amount of programs aiming to improve youth mental health as protective action. However, community leaders tend to select programs that are costly and heavily marketed, which often lack evidence of their effectiveness or safety. The authors of this article denounced the absence of an independent best evidence-based source of information to help leaders make decisions before adopting said programs. As a result, they share the findings of a pilot project looking to "**establish the foundation of an online Canadian resource for best evidence-based school mental health implementations that applies critical evaluation techniques to evaluate mental health programs marketed to school**" (p. 5) (see teenmentalhealth.org).

A national committee made of mental health professionals, researchers, and school administrators, was created to build that tool. They selected two suicide prevention programs (Signs of Suicide Prevention program, or SOS, and Yellow Ribbon Suicide Prevention Program, or YR) for the pilot. **Interestingly, these programs are widely marketed but no research shows evidence of their impact on preventing suicide.** The committee assessed the programs' effectiveness, cost-effectiveness, and safety based on a systematic review using the Office of Justice Program What Works Repository (OJP-R). In it, six levels of evidence of effectiveness (effective, effective with reservation, promising, inconclusive evidence, insufficient evidence, and ineffective) and three levels of readiness for dissemination (fully prepared for widespread dissemination, fully prepared for limited dissemination, and not ready for dissemination) exist. In addition, programs are also ranked on six criteria (evidence from randomized controlled trials, replication with different population and context, focus on socially important behavior outcomes, identification of evidence of enduring effects, and dissemination capacity) and four indicators (information on training and support materials, technical assistance support, informational materials, and quality control for implementation).

Only two studies for each program passed the OJP-R with homogeneity in study design, duration, outcome measures, population sizes, and timeframe. Neither study detected differences in suicide rates nor reached the level of "promising" in the JP-R criterion for

readiness of program dissemination. **The authors warned that while there are findings that show that the SOS program improves knowledge and attitudes towards suicide, as well as increased help-seeking behaviors, these factors are not the same as suicide prevention per se.** The authors conclude by re-emphasizing the tension between the positive conclusions about the programs reported by studies, and the negative conclusions in reviews conducted by independent investigators. They call for more thorough evidence to counter the marketing of programs like SOS and YR in schools, and state that the challenge of reducing youth suicide rates must be addressed using interventions that are proven to be be efficacious, safe, and cost-effective.

Risk factors: mental health disorder before age 25
Protective factors: evidence-based school programs

### REFERENCE

Wei, Y., Kutcher, S., & LeBlanc, J. C. (2015). Hot idea or hot air: A systematic review of evidence for two widely marketed youth suicide prevention programs and recommendations for implementation. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *24*(1), 5-16.

## ARTICLE 2: SOURCES OF STRENGTH YOUTH SUICIDE PREVENTION PROGRAM

### SUMMARY

Current school-based suicide prevention programs focus on reducing individual-level risk factors by increasing identification and referral for treatment through three main strategies: i) direct screening for mood, substance abuse, and suicide problems, ii) school staff training as gatekeepers, and iii) hybrid approach of curriculum and screening for self-referral. **However, little research has been done to look at programs that modify socio-ecological factors,** although it is known that social connectedness may reduce suicide risk through the well-established association between suicide behavior and adolescents' social ties and norms. The authors of this study looked at the effectiveness of a suicide prevention program called Sources of Strength, an intervention focusing on supporting protective factors through high school peer leaders trained to disseminate school-wide messages.

**Sources of Strength is a school-based suicide prevention approach that builds socio-ecological protective influences across the student population.** Student leaders are trained to impact

peer behavior and norms through defined messaging and adult mentoring by encouraging peers to: i) engage "trusted adults" to increase youth-adult communication, ii) reinforcing the expectancy that friends ask adult for help for suicidal friends, and iii) using interpersonal and formal coping resources. The study included 18 high schools from urban and rural areas, which were randomly assigned to the intervention via a waitlist control design. In both cases, surveys were distributed at baseline and at four months post-intervention to peer leaders (N=453) and students (N=2,675). The experiment has two goals: to measure the impact of the intervention on student peer leaders, and to look at the impact of the intervention on norms about suicide and social connectedness in the full student population. The peer leader assessment measures three constructs: i) suicide perceptions and norms, ii) social connectedness, and iii) peer leader behaviors. For the school population, four scales looked at peer leaders' messaging and their effect on suicidal ideation.

Results showed that the training increased peer leaders' connectedness to adults and school engagement, with the largest increase for those who initially had the least adaptive norms regarding suicide**. For students, results showed that the intervention improved their perception of adult support and the acceptability of help-seeking, particularly for students with a history of suicidal ideation.** The authors conclude by stating some limitations in their study, including reliance on self-report measures and the short-term aspect of the investigation.

Risk factors: peer suicidal behavior (which is linked to suicide acceptance, and suicide behavior and planning)
Protective factors: quality and density of relationship ties, norms, social connectedness (psychological well-being, increased monitoring by others, exposure to normative social influences that encourage adaptive coping strategies)

## REFERENCE

Wyman, P. A., Brown, C. H., LoMurray, M., Schmeelk-Cone, K., Petrova, M., Yu, Q. & Wang, W. (2010). An outcome evaluation of the Sources of Strength suicide prevention program delivered by adolescent peer leaders in high schools. *American journal of public health*, *100*(9), 1653-1661.

## ARTICLE 3: SYSTEMATIC REVIEW OF ELDERLY SUICIDE PREVENTION PROGRAMS

### SUMMARY

**Though suicide rates are high among older adults, research on suicide prevention as well as clinician training for that age range is lacking**, despite the fact that the global world population is aging significantly. Suicide prevention strategies policies across age groups cover the following approaches: awareness and education; screening; treatment intervention; means restriction; and codes of conduct for media coverage. Nevertheless, there is little research on how these approaches apply specifically to older adults. Using the Cochrane Collaboration as guideline, the authors of this article thus conducted a systematic review of interventions for suicidal older adults (age 60 and older) in order to identify successful strategies as well as areas of need. A total of 19 studies with empirical evaluation were included in the review.

The review identified primary care interventions (IMPACT and PROSPECT interventions), community-based outreach (mental-health workshops for the elderly based in Japan), telephone counseling (outreach programs), clinical treatment (short-term depression treatment with pharmacotherapy and/or interpersonal psychotherapy sessions), and resilience improvement (short cognitive behavioral workshop and interpersonal psychotherapy). **A majority of the studies primarily addressed risk factor reduction, and showed positive results, with lower levels of suicidal ideation or suicide rate in patients and participating communities.** Nine of the eleven programs reviews addressed risk predictors (depression screening and treatment, information about symptoms, treatment options, medication use, social isolation reduction); three studies measured suicide rate as outcome, four studies looked at impact on suicidal ideation, and four were assessing depression levels. However, the authors found a lack of evidence-based studies designed for the elderly.

The reviewed programs were found to be efficient mainly for women; they did not all measure suicidality as an outcome measure for interventions, but rather depression or hopelessness; and they did not all aim at improving protective factors. **The authors conclude by stating a need for future research exploring physician education, gatekeeper training, means restriction, and codes of conduct for media coverage as strategies that still need to be explored.** They further underline how development of positive aging, coping, and resilience are still untapped potential venues for older adult suicide prevention and intervention.

Risk factors: distal and proximal, psychiatric disorders, difficulty adapting to retirement

Protective factors: depression screening and treatment, isolation decrease, hope/goal realization/serenity/flexibility/humor/attitude toward retirement, social functioning, social support, satisfaction of interpersonal needs

## REFERENCE

Lapierre, S., Erlangsen, A., Waern, M., De Leo, D., Oyama, H., Scocco, P. & Quinnett, P. (2011). A systematic review of elderly suicide prevention programs. *Crisis*, 32(2), 88-98.

# ARTICLE 4: COGNITIVE REAPPRAISAL INTERVENTION FOR SUICIDE PREVENTION (CRISP) FOR OLDER ADULTS

## SUMMARY

**Between 2000 and 2015, suicide rates and suicide deaths have almost doubled among adults age 50 and older.** For patients hospitalized with suicidality (suicidal ideation or attempt), suicide rates are particularly elevated--with the higher risk for suicide at three month post-discharge. Nonetheless, there are few randomized controlled trials of psychosocial interventions looking at decreasing suicide risk after suicide-related hospitalization for middle-aged adults. The need is additionally important as this age group faces an increase in medical comorbidity, disability, decreased cognitive and physical functioning, and late-lide losses. In this article, the authors examine the stages and techniques of a psychosocial intervention for cognitive reappraisal to reduce suicide risk in middle-aged and older adults recently hospitalized for suicidality, known as CRISP.

The precept of CRISP is that an emotional crisis triggered by personal emotions (ex., financial stress, pain, disability, health) is often the starting point for suicidality hospitalization. **The theory--based on psychosocial interventions and affective neuroscience--posits that by identifying the personalized triggers and associated emotions, providing an adaptive response under the form of cognitive reappraisal will reduce these negative emotions and the suicidal ideation.** The authors argue for the use of cognitive reappraisal as target for the following reasons: i) suicidal ideation and behavior are often linked to the inability to regulate intense negative emotion, ii) cognitive reappraisal is an emotion regulation strategy that possesses neurobiological correlates, and iii) increased cognitive reappraisal is linked to a decrease in suicide risk.

The program lasts 12 weeks, and for the study, 16 patients were involved in going through the cognitive reappraisal stages: identification of triggers, identification of negative emotions, examination of the utility of negative thoughts, reappraisal of emotional trigger, distancing from the emotional experience, and reappraisal of the emotional response to trigger. Together, the patient and therapist work through the stages and set up a plan that includes phone or home sessions. **The authors present a clinical case example and report results from his self report, highlighting his improved cognitive reappraisal score, reduced negative emotions, and prevention of suicidal ideation increase over 24 weeks.** They open their conclusion by proposing that further developments of CRISP can be informed by stakeholder input (ex., family members, clinicians) and additional affective neuroscience findings.

Risk factors: emotional crisis, personalized triggers, mental disorders (depression, borderline personality disorder), difficulty to regulate intense negative emotions
Protective factors: cognitive reappraisal of negative emotions

### REFERENCE

Kiosses, D. N., Alexopoulos, G. S., Hajcak, G., Apfeldorf, W., Duberstein, P. R., Putrino, D., & Gross, J. J. (2018). Cognitive Reappraisal Intervention for Suicide Prevention (CRISP) for Middle-Aged and Older Adults Hospitalized for Suicidality. *The American Journal of Geriatric Psychiatry*, *26*(4), 494-503.

## ARTICLE 5: "ZERO SUICIDE" (ZS) MODEL IN OUTPATIENT HEALTH

### SUMMARY

In the dramatic increase in US suicide rates in past years, one commonality in those dying by or attempting suicide is their treatment in outpatient behavioral healthcare the year prior. This phenomenon is partly explained, according to the authors, by the fragmented American healthcare system and the gap between research and practice. For instance, researchers have long recommended universal screening across various settings to better identify at-risk patient, but in reality, few individuals receive screenings in healthcare settings. Three potential reasons why people receiving services still die of suicide can be explained by i) an inadequate detection of suicide risk, ii) the under-deployment of evidence-based, suicide-specific interventions, and iii) decrease of care intensity during high risk periods. In addition, many clinicians do not have the appropriate training to provide interventions targeting at-risk patients.

A response, known at the Zero Suicide (ZS) model was released in 2012 by the US Action Alliance under the National Strategy for Suicide Prevention. ZS is a resource for providers to create a systematic approach (i.e., assess, intervene, monitor. See figure 1 below) to suicide prevention and its quality in healthcare. It is based on seven essential elements, including four clinical elements focusing on how the patient should be treated: 1) Identify (providing guidelines for evidence-based screening and assessment of suicide risk for all patients at intake and regular intervals), 2) Engage (recommending pathways for elevated risk patients), 3) Treat (using evidence-based, suicide-specific interventions for safety on short and long term), 4) Transition (ensuring continuity of care and close monitoring of suicidal individuals between clinical contact and care transitions); and three elements focusing on implementation factors: 5) Lead (engaging leadership and administration to create a culture of change about suicide prevention), 6) Train (developing a competent suicide prevention workforce), 7) Improve (investing in data-driven quality improvement).

Preliminary data of healthcare systems that have implemented ZS showed a reduction in suicide deaths in the year after the intervention. In this paper, the authors share results of a study looking at the implementation of ZS in 170 free-standing New York State outpatient behavioral health clinic, with a total or more than 80,000 patients, through the preparation-implementation-maintenance phases of the program. Data for the study is currently under analysis and thus not yet available, but for the authors, models like ZS highlight the importance of broader dissemination of empirically-supported care for suicidal patients in outpatient behavioral healthcare, which can, in turn, reduce suicide rates.

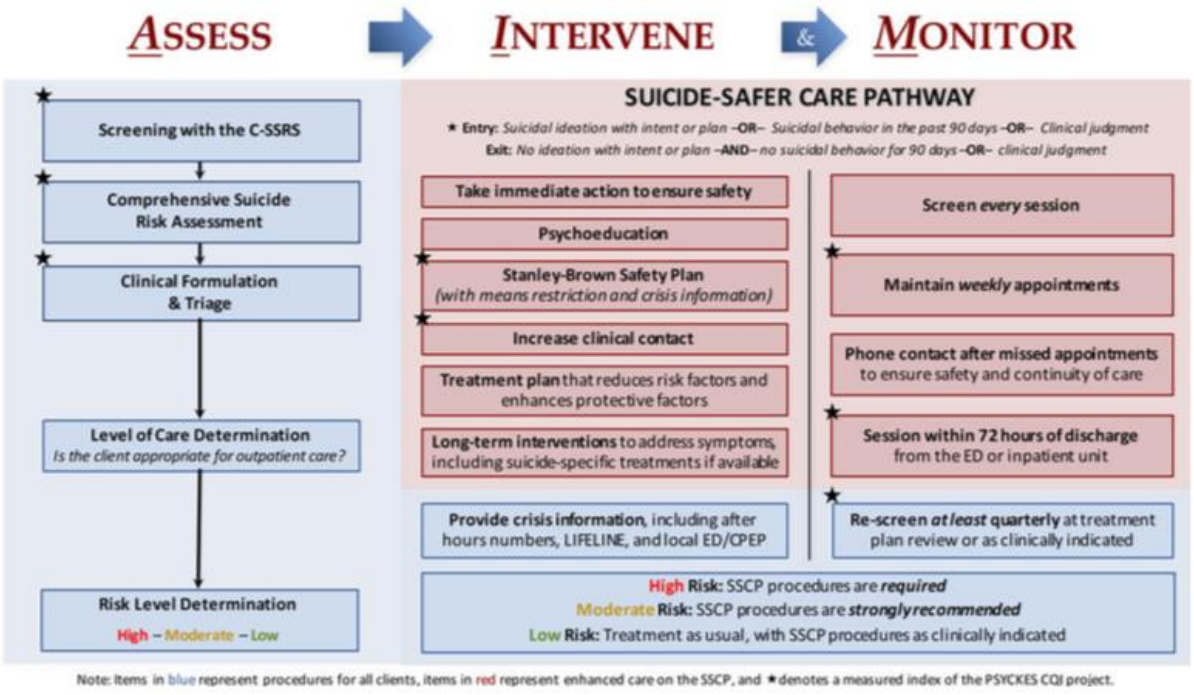


**Figure 1.**
Clinical procedures of the Assess, Intervene, and Monitor for Suicide Prevention (AIM-SP) program of suicide-safer care, an operationalization of the Zero Suicide model for outpatient behavioral health clinics.

Risk factors: (chronic/distal and acute/proximal) depressive disorder, Schizophrenia-spectrum disorder, ADHD, anxiety disorder, bipolar disorder, personality disorder
Protective factors: (chronic/distal and acute/proximal) screening and assessment, pathway to care, continuing contact and follow-up

## REFERENCE

Labouliere, C. D., Vasan, P., Kramer, A., Brown, G., Green, K., Rahman, M. & Stanley, B. (2018). "Zero Suicide"–A model for reducing suicide in United States behavioral healthcare. *Suicidologi*, *23*(1), 22.

## CONCLUSION

Suicide prevention remains a critical issue for two demographics: older adults, and adolescents. Wei et al (2015) explored two of the most popular suicide prevention programs for adolescents,

Signs of Suicide (SOS), and Yellow Ribbon Suicide Prevention Program (YR). The authors noted that while both are popular, there has been little independent evaluation of these initiatives. Wei et al found that neither SOS nor Yellow Ribbon were rated as "promising." In addition, the study reported that while programs increased knowledge and attitudes about suicide prevention, these are not the same as effective intervention.

Wyman et al (2010) investigated the ecological factors that may be related to suicide, investigating a program called Sources of Strength that aims to build protective factors across the student population. The authors found that adult support and help-seeking behavior can be important prevention initiatives at school.

In a study on suicide prevention for older adults, Lapierre and colleagues (2011) investigated 11 programs that used a number of different strategies, including primary care interventions, outreach, counseling, and skills improvement. The authors found few, evidence-based studies specifically designed for the elderly, noting that development of positive aging, coping, and resilience could be integrated into these initiatives.

Kiosses and colleagues (2018) explored an intervention based on "cognitive reappraisal" that taught older adults to identify negative thoughts and emotions for the purpose of reducing suicide ideation. The authors found that the program reduced suicide ideation by reducing negative emotions and helping patients to provide an provide an adaptive response.

Labouliere et al (2018) investigated a model for reducing suicide in the U.S., noting that in the US healthcare system, universal screening for suicide is not widely practiced. The "Zero suicide" model, on the other hand, aims to properly diagnose those at risk for suicide, provide evidence-based interventions, and offer continuation of care during high-intensity periods. Overall, this review explored a number of promising interventions for adolescents and older adults.

## AUTHOR INFORMATION

Benjamin Gleason, PhD is the Director of Applied Research for the Prospectus Group. He earned a PhD in Educational Psychology & Educational Technology from Michigan State University, researching how to best support communities of learners through educational technology. Before academia, Benjamin has worked in youth and adult-serving learning spaces for almost fifteen years, from designing youth-initiated community service projects and teaching high

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