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Evidence-based Suicide Assessment and Managment Training for Mental Health Professionals

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Teenage Suicide Prevention Training for Mental Health Professionals in an Outpatient Mental Health Clinic.

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Abstract

Background: Suicide is a significant public health concern both nationally and globally. While the suicide rate has been decreasing in recent years, evidence shows that the rate of suicide among teenagers and adolescents has been on the rise. Teenage suicide accounts for 14% of all deaths by suicide in the United States, calling for effective interventions in various settings. However, inadequate knowledge of the potential signs and risk factors of suicide hinders mental healthcare professionals' ability to recognize at-risk patients.

Purpose: The project's objective was to evaluate the effects of the intervention on mental health workers' knowledge, skills, and screening rates based on the success of Applied Suicide Intervention Skills Training (ASIST) and other evidence-based programs. This project aimed to address issues of lack of training and equipping professionals to have suitable instruments toward achieving overall and successful suicide prevention in teenagers.

Method: The Suicide Knowledge and Skills Questionnaire (SKSQ) was used pre and post educational intervention to measure the effect and determine whether there was an increase in the degree of the knowledge and skills of the participants.

Intervention: Evidence-based interventions were used as education training to equip providers with skills in assessing and managing self-harm and suicidal behaviors among adolescents using the Ask Suicide-Screening Questions (ASQ) toolkit. The mental health professionals in the outpatient care clinic, such as mental health nurse practitioners, therapists, social workers, and nurse practitioner students, were among the project's participants.

Results: The participants gave correct answers to 66.1% of the questions in the pre-test SKSQ. After the implementation of the suicide training the participants correctly answered 70.7% of the questions, an improvement from their pre-intervention survey results measuring the level of knowledge about suicide.

Conclusion: The project has shown improvements in enhancing knowledge and skills when dealing with suicidal behavior, particularly in adolescents. Following the comprehensive analysis with the Suicide Knowledge and Skills Questionnaire, the study showed an increase rise in participants' ability to understand conceptions related to suicide and a high. However, further exploration is necessary to determine whether such interventions can potentially reduce teenage suicide and suicidal attempts.

Keywords: Teenage Suicide, Mental Health, education, knowledge, skills, management

DNP Project Proposal

Introduction

Suicide refers to a fatal self-injurious act with some evidence of the intent to die. Globally, approximately one million people die each year through suicide (World Health Organization [WHO], 2021). In the United States, more than 30,000 people die annually by suicide (Centers for Disease Control and Prevention [CDC], 2023). The rate of suicide has been on the rise in the United States, with an increase of 30% between 2000 and 2018 [CDC],2023 Even though this rate decreased by three percent from 2019 to 2020, the National Vital Statistics System determined that the suicide rate was rising among adolescents and young adults (Barry, 2023). As the CDC (2023) emphasized, teenagers accounted for around 14% of suicide deaths (11.0 per 100,000) in the United States.

Suicide is the second leading cause of death among teenagers. A key risk factor for completed suicide is suicidal behavior. The incidence of suicidal behaviors among teenagers is a public health concern calling attention to the need for effective treatments in various settings, including outpatient mental health facilities. Suicidal behavior refers to thoughts or actions that indicate an individual's desire or intention to end their life (Abdullayeva, 2019). One of the most effective ways to combat serious public health issues, such as suicide, is to increase healthcare workers' knowledge regarding risk factors, assessment procedures, and evidence-based interventions.

Suicide is a significant public health concern and a leading cause of preventable death among adolescents in the United States. Patients who contemplate suicide often reach out for help from mental health practitioners in outpatient settings. Labouliere et al. (2021) stated that more than 90% of patients who committed suicide had a mental health disorder that was diagnosable and treatable. Bilsen (2018) also found that around 50% of adolescents who

committed suicide had been treated in a psychiatric setting the previous year. Despite the significance of training psychiatric healthcare practitioners on best practices for suicide prevention, including assessment and treatment, the evidence showed that around 40% of mental health professionals did not have adequate training in suicide assessment and treatment (Erbuto et al., 2021).

Evidence suggests that training healthcare professionals in identifying and managing suicidal patients is crucial for suicide prevention (Pompili et al., 2017). Evidence-based training programs like Applied Suicide Intervention Skills Training (ASIST) improve professionals' knowledge and skills in suicide prevention and management (Pompili et al., 2017). Such programs help professionals identify suicide risk factors and acquire more knowledge and skills regarding suicidal behavior and individual management (Erbuto et al., 2021). Given the high rate of suicide and suicidal behavior among teenagers in the United States, the proposed quality improvement project aimed to assess the impact of an evidence-based intervention on improving mental healthcare workers' suicide-related knowledge and skills

Problem Description

Teenage suicidal behaviors are a serious public health issue worldwide. Suicide is the fourth leading cause of mortality among young people aged 15 to 29 years, according to the WHO (2021). Increased exposure to stress, restricted access to mental health treatments, and stigma around mental health concerns have all been linked to an alarming rise in the prevalence of suicidal thoughts and suicide attempts among teenagers (Liu et al., 2019). Teenage suicidal behaviors have far-reaching effects, impacting families, friends, and communities. While the financial costs related to suicide, including healthcare, missed productivity, and other variables, might be considerable, they pale in comparison to the

emotional toll of suicide, which can cause tremendous anguish and sadness for those left behind (Shepard et al., 2016).

Since approximately 90% of teenagers who commit suicide have mental health disorders, mental health professionals can play a major role in the early identification and management of teenagers with suicidal behaviors (Ougrin, 2019). However, inadequate knowledge of the potential signs and risk factors affects professionals' capacity to recognize teenagers at risk of suicide. Several studies show that approximately 40% of mental health trainees have limited educational training on suicide, hindering the implementation of best practices in suicide management (Bilsen, 2018). Evidence-based interventions such as the ASIST program have been shown to enhance practitioners' knowledge and skills regarding suicidal behavior identification and management (Pompili et al., 2017). There is a need for such evidence-based training and education for mental health professionals.

Available Knowledge

A growing corpus of work is devoted to understanding and resolving the issue of suicidal behaviors among adolescents and teenagers, a major public health concern. Individual, family, societal, and cultural variables all have a role in developing suicidal behaviors. The risk factors, protective factors, and successful training interventions to enhance healthcare providers' knowledge and skills related to identifying and preventing suicide among teenagers have been the subject of previous research. This is further discussed under the subtopics below.

Risk Factors

The studies by Abdullayeva (2019), Carballo et al. (2020), Miranda-Mendizabal et al. (2019), Wasserman et al. (2021), Nock et al. (2013), Ati et al. (2021), and Zygo et al. (2019)

provide valuable insights into the factors influencing suicidal behavior among adolescents and young individuals. Abdullayeva (2019) denoted the effect of dysfunctional family dynamics, parenting styles, and hereditary predisposition on the development of self-injurious behaviors in adolescents. The study focused on a cohort of adolescents aged 15 to 17 who exhibited symptoms of depression and behavioral disorders. The study found that a significant proportion (53%) exhibited a predisposition to alcoholism from their parents and mental disorders from their relatives. This predisposition resulted in familial conflicts, non-adherence to moral and social norms, and suboptimal financial and residential circumstances. The study also determined that a significant proportion of adolescents (70%) resided in dysfunctional families characterized by destructive relationships. Carballo et al. (2020) focused on attachment patterns and their relationship with a history of suicidal behavior. The researchers identified preoccupied and unresolved-disorganized attachment patterns in the case group, whereas the comparison group demonstrated dismissing attachment patterns. Miranda-Mendizabal et al. (2019) explored gender-specific risk factors for suicidal behaviors. The study found females to have a higher likelihood of attempting suicide, while males had a higher likelihood of suicidal death. The study highlighted risk factors specific to each gender, including mental disorders, exposure to violence, and interpersonal difficulties.

Wasserman et al. (2021) focused on the influence of structural determinants of gender disadvantage, violence, and poor mental health on suicidal behavior among young individuals (16–24 years). The study determined that suicidal behavior was linked to violence and psychological distress and that gender disadvantage exacerbated rural women's vulnerability to these factors. Ati et al. (2021), Nock et al. (2013), and Zygo et al. (2019) highlighted additional risk factors for suicidal behavior among adolescents, for instance, mental disorders, peer influence, trauma or abuse history, social isolation, bullying, academic problems, and demographic characteristics.

Protective Factors

It is essential to identify protective variables that may help lower the risk of suicide among teenagers and adolescents and to recognize risk factors for suicidal behaviors. Lower levels of engagement in suicidal thoughts and conduct have been consistently linked to social support from family, friends, and significant others (Carballo et al., 2020). Positive coping methods, problem-solving abilities, and resilience have been proven to mitigate stress impacts and safeguard against suicidal thoughts and behaviors (Kashani et al., 2012). In addition, communal and social variables and individual-level protective factors like resilience may significantly reduce the risk of suicidal behaviors among teenagers and adolescents (Sher, 2019). Resilience lessens the likelihood of suicidal thoughts and actions by equipping people with the resources to deal with adversity, grow coping mechanisms, find meaning and purpose in life, connect with others, solve problems, and seek assistance (Sher, 2019). These traits help people feel more emotionally stable, provide them with the resources to cope with adversity, and decrease the likelihood that they will consider or attempt suicide (Sher, 2019).

The Role of Mental Health Professionals in Outpatient Settings

Outpatient mental health settings are essential for recognizing, evaluating, and treating suicidal behaviors in teenagers and adolescents. In these facilities, mental health providers can use evidence-based treatments and give personalized care to each patient (Ougrin, 2019). Mental health providers may work with other experts, including primary care doctors, educators, schools, and community groups, to create a seamless, complete treatment system for at –risk adolescents. There is growing research on best practices for mental health professionals dealing with suicidal adolescents, including recommendations for risk assessment, safety planning, and crisis management (Pisani et al., 2016). Research also emphasizes the need for continuous professional development and training to guarantee that

mental health practitioners have the most up-to-date information and skills in suicide

prevention (Luxton et al., 2013).

Education on Suicide Prevention

Multiple research articles support the notion that many healthcare practitioners lack

suicide prevention education (Erbuto et al., 2021). According to Erbuto et al. (2021),

inadequate knowledge of the potential signs and risk factors for suicide negatively impacts

healthcare professionals' capacity to identify patients at risk of suicide. The authors surveyed

the knowledge and attitudes of a large sample of mental health professionals, discovering that

60% felt they lacked adequate training or skills to help suicidal patients. Porte et al. (2020)

found a lack of consistent standards in higher education in nursing in suicide assessment and

prevention, presenting a gap in suicide-specific interventions. Ayer et al. (2022), meanwhile,

discovered knowledge gaps among a group of healthcare workers regarding suicide and

suicide assessment, including risk factors and suicide rates of specific populations, such as

the young and the elderly. The factors mentioned above support the need for promoting

suicide-related knowledge and skills among healthcare professionals.

A consistent finding in the literature is that training can lead to positive changes in

attitudes and improved detection skills, even when that training varies. For instance, Kim and

Kim (2020) conducted a 12-hour education program with healthcare practitioners that

significantly improved their attitudes and competence regarding suicide prevention and

management of patients who attempted suicide. Kawashima et al. (2020), meanwhile,

conducted a multicenter study involving a 16-hour suicide prevention training program that

showed improvements in medical personnel's skills, attitudes, and self-efficacy in suicide

prevention, especially in those without prior training. In addition, a two-hour suicide

educational intervention program for healthcare professionals by Saini et al. (2020)

significantly improved these professionals' knowledge and attitudes about suicide.

Despite variations in training duration, Li et al. (2020) highlighted the importance of

interview skills for detecting suicidal intent and indirect interrogation in effective training

programs. Gatekeeper training, aimed at training healthcare professionals to recognize

warning signs of suicide, was identified as particularly beneficial (Pistone et al., 2019). The

literature identifies two commonly used gatekeeper training methods: ASIST and QPR

(Question, Persuade, and Refer). Applied Suicide Intervention Skills Training (ASIST) is a

14-hour education program that offers training in "suicide first aid," enabling participants to

identify signs of suicide risk and effectively respond to enhance the individual's safety while

connecting them with appropriate resources (Yonemoto et al., 2019). The program

incorporates simulations to enhance the development of practical skills (Yonemoto et al.,

2019). QPR, on the other hand, is an online training program that typically spans six to eight

hours and focuses on enhancing knowledge of and attitudes toward suicide (Yonemoto et al.,

2019). Its primary objectives are to enhance participants' comfort level in addressing suicide-

related concerns, train healthcare providers to conduct triage assessments for immediate risk,

address urgent patient safety needs, and determine the most suitable care setting (Yonemoto

et al., 2019). After examining various models, the workgroup responsible for the National

Suicide Prevention Lifeline chose ASIST as the most suitable and effective approach for

training staff within the network of crisis centers at a national level (Pistone et al., 2019).

Several studies have demonstrated the effectiveness of the ASIST program in

improving suicide-related knowledge and skills among healthcare providers and clinical

students. The results of a study by Kuhlman et al. (2021) suggested that the knowledge and

attitude of medical students in introductory psychology programs improved after ASIST

program implementation. In another study by Magness et al. (2023), the beliefs and helping

behaviors of a sample of mental health professionals likewise improved significantly after the

ASIST program was implemented. The project outcomes also demonstrated enhanced

knowledge and self-efficacy in utilizing suicide prevention techniques (Magness et al.,2023).

Rationale

Many informal and formal frameworks, models, and theories support implementing a

quality improvement project to increase suicide-related knowledge and skills among mental

health professionals. The evidence-based practice model guiding the proposed project is the

Iowa model of evidence-based practice (Appendix C). The model was developed in the 1990s

by the University of Iowa Hospitals to guide nurses in utilizing research findings to help

enhance patient care (Cullen et al., 2022). The multi-directional model that helps nurses

identify practice issues and research resolutions as well as implement changes through a

chain of steps (Hanrahan et al., 2019). The Iowa evidence –based practice (EBP) model has

offered healthcare organizations a systematic approach to addressing, translating, and

implementing changes using feedback loops (Hanrahan et al., 2019). The model entails

various steps. The IOWA model's first step entails identifying a problem or opportunities for

improvement. During this initial stage, the primary investigator identified a problem related

to insufficient knowledge about suicide management in adolescents among mental healthcare

professionals in the clinic (Hanrahan et al.,2019. There was an increase in suicidal behavior

among the teenage population even after just been seen by their therapist at the clinic. This

was a call for concern if they have been assessed for suicidal behavior or discussed any safety

plans during their visit.

The second step of the IOWA model includes stating the purpose and developing a

clinical question (Hanrahan et al., 2019). During this step, the primary investigator developed

a clinical question based on the PIO (Problem; Intervention; Outcome) format. The third step entails forming a team and assembling, appraising and synthesizing the available body of knowledge (Hanrahan et al., 2019). The team included a panel of stakeholders including the primary investigator and two mental health nurse practitioners working at the setting. The team was led by the primary investigator who is passionate and committed to improving the management of suicidal behaviors among adolescents. The team met to review both the problem (increase in suicidal behavior) and knowledge focused triggers and determined that improving the management of suicide among adolescent patients was a priority for the organization. The project received enthusiastic support throughout the clinic and at the highest level of leadership level.

The next step of the IOWA model entailed implementing the change using a pilot program (Hanrahan et al., 2019). During this stage, the project intervention was implemented at the practice setting, including a validated evidence-based suicide screening tool and an educational program to train providers on assessing and managing suicidal behaviours in teenagers. Also, the pre-and-post intervention data was collected to evaluate the effectiveness of the intervention. The last two stages of the IOWA included integrating and sustaining the practice change and disseminating the findings. The project eventually led to a positive outcome (improvements in enhancing the knowledge and skills of mental health professionals when dealing with suicidal behavior), and the project team members will deploy this process to other outpatient clinics within the region.

Specific Aims

Suicide is a chief public health concern among teenagers. Mental health professionals can play a major role in identifying teenagers at risk of suicide and implementing evidence-based suicide prevention interventions. However, inadequate knowledge of the signs and risk factors of suicide affects their capacity to recognize teenagers at risk (Erbuto et al., 2021).

Improved knowledge and skills about suicidal behavior identification and management can allow healthcare professionals to better identify at-risk teenage patients, increasing suicide prevention efforts (Erbuto et al., 2021). Evidence-based suicide training programs for healthcare providers improve their knowledge of suicidal behavior and enhance their skills in managing suicidal people. Against this background, the proposed quality improvement project aims to improve the suicide-related knowledge and skills of psychiatric mental health professionals in an outpatient mental health clinic by implementing an evidence-based training program for suicide identification. The project aims include:

1. Assessing diverse healthcare professionals' general knowledge of suicide before and after the implementation of the training program.

2. Implementing an evidence-based suicide training program aimed at enhancing suicide-related knowledge and skills among diverse healthcare providers in an outpatient mental health clinic

3. Implementing a standardized suicide screening tool to increase suicide screening rates among providers

Methodology

Context

This improvement project was implemented at an outpatient mental health clinic in Nottingham, Maryland, a Community Mental Health clinic Center providing treatment services for all individuals including Children/adolescent experiencing persistent mental illness and maladaptive functioning. The clinic focuses on delivering innovative and evidence-based services to children, teenagers, and families facing mental health challenges. The objective is to empower and educate individuals at any stage on their path toward well-being and recovery by providing comprehensive behavioral healthcare services within the

community. The clinic comprises two mental health nurse practitioners, fifteen therapists, three social workers, and a secretary, and there are also internships/clinical rotations for nurse practitioner students.

The project executed the educational intervention for Mental Health practitioners at an outpatient mental health clinic in Nottingham, Maryland. The investigator was responsible for administering the interventions after identifying that there was a lack of knowledge and skills in managing the adolescents at the clinic with suicidal behavior. The investigator implemented interventions grounded in empirical evidence, evaluated potential risks, offered counselling services, and collaborated with other experts within a framework of coordinated care.

Cost–Benefit Analysis/Budget

Suicide is costly and takes a toll on survivors, families of the deceased person, friends, and society at large. Doran and Kinchin (2020) state that the average cost of one suicide could go up to one million dollars, given the medical expenses and loss of work productivity. Considering the annual number for teenage suicide deaths, this amount could be in the trillions. The benefits of implementing this project outweigh the cost of one suicide for an organization. Improving the suicide-related knowledge and skills of healthcare professionals can translate to better quality care, improved patient satisfaction, and decreased rate of teenage suicide death and associated healthcare costs.

The project budget accounted for direct and indirect costs associated with implementing the intervention(s) and potential benefits.

Direct costs may include:

- Training costs for mental health professionals and support staff on evidence-based interventions for suicidal behaviors.

- Costs of materials and resources needed for the intervention, such as therapy manuals
  and assessment tools.

Indirect costs encompassed:

- Time spent by mental health professionals and support staff on implementing,
  monitoring, and evaluating the intervention(s).

Potential benefits of the project included:

- Improved suicide-related knowledge and skills among healthcare providers,
  potentially translating to better identification of at-risk teenagers and improving
  suicide prevention efforts;
- Reduction in suicidal behaviors among teenagers and adolescents, leading to
  improved mental health outcomes and increased resilience; and
  Cost savings related to the prevention of suicide attempts and completions, such as
  reduced healthcare utilization and productivity losses.

Intervention

The intervention in this project was based on evidence-based practices including the
implementation of a validated, evidence-based screening tool for suicide risk and the
implementation of an educational program to train providers on assessing and managing
suicidal behaviours in teenagers. The proposed tool was the Ask Suicide-Screening Questions
(ASQ) toolkit (Appendix B). The National Institute of Mental Health (NIMH) is the
organization credited with the authorship of the Ask Suicide-Screening Questions (ASQ)
(National Institute of Mental Health, 2020). NIMH sort to find ways of assessing suicide risks
considering the rampant cases of suicide that were fast becoming a common occurrence
("Ask suicide-screening questions (ASQ) toolkit," n.d.). The ASQ comprises five screening
questions that take approximately 20seconds to administer. The first four items assess major
facets of established suicide risk factors, including suicidal ideations, perceived

burdensomeness on others, and history of suicidal attempts (Aguinaldo et al., 2021). In this project, a "yes" response to any of the questions constitutes a positive screen for suicide and thus require further assessment (Aguinaldo et al., 2021). Patients with a positive screen will be asked an acuity question to assess whether they have active suicidal ideations. Patients who responded with "yes" to the question "Are you having thoughts of killing yourself right now? were considered acute positive screen for suicide and those that responded "no" was considered non-acute screen. Participants with an acute positive screen received a complete safety evaluation and a mental health evaluation before they left the clinic or were referred for hospitalization.

The ASQ is a validated, evidence-based tool for suicide screening in people aged 10–21 years. The tool provides three varying outcomes: a negative screen, an acute positive screen, and a non-acute positive screen (Aguinaldo et al., 2021). These results help clinicians identify the level of risk for suicide and guide the next steps in the evaluation process. The tool has a specificity of 87.6% and a sensitivity of 96.9% in identifying suicide risk in youth and adults in psychiatric settings (Aguinaldo et al., 2021). The tool will be incorporated into the electronic health records of the outpatient clinic to facilitate documentation of the suicide risk of teenagers seen in the setting.

Before the project was implemented, the DNP student met the outpatient mental health clinic's administrator a month before the intervention to discuss the upcoming QI project at the clinic. The QI project targeted mental health nurse practitioners, Nurse practitioner students, therapists, and social workers at the clinic. Participants were then recruited via email, and those who agree to participate were sent the pre-intervention Qualtrics survey two weeks before the implementation of the suicide training program. The Qualtrics survey collected the provider's demographic information and also include the Suicide Knowledge and Skills Questionnaire (SKSQ), which is a 13-item questionnaire for

assisting healthcare providers' knowledge about suicidal behavior and their perceived competence in managing suicidal patients (Smith et al., 2014). The pre-intervention survey responses was utilized to inform the creation of educational materials while maintaining the confidentiality of participants' identities.

After completing the pre-intervention survey, the project leader implemented the brief suicide education training program. The providers will participate in a two-hour evidence-based training program based on the ASIST curriculum. The DNP student developed the training program. The major goal of the training program will be to educate the providers on the assessment, identification and prevention of suicidal behavior among teenagers including the use of the ASQ tool.

A two-hour training program included distributing resource material and five interactive sessions (approximately 20-25 minutes each). The initial session provided an overview of understanding suicide epidemiology using the latest statistics and general warning signs, misconceptions, and myths about suicide and suicide prevention among the youth. The following sessions focused on enhancing the providers' skills, including the ASQ tool in addition to suicide risk assessment levels and risk stratification using the validated tool. Risk stratification is vital, given it enables providers to respond appropriately and allocate the necessary resources based on the patient's risk. The later sessions will include educating the providers on prevention and management strategies for youth who present with suicidal behavior. Scenarios and case studies were used to improve further the provider's skills on the assessment and management of youths at risk of suicide.

Analytical Approach of the Improvement Project

The intervention was evaluated at one-month post-intervention. Four weeks after a thorough pre-intervention evaluation and exposure to the brief suicide training program, the participating providers were emailed the link to the post-intervention survey in Qualtrics. The

results will be compared with the pre-intervention to determine if there have been changes in knowledge and skills related to identifying and treating suicidal behavior and if the changes are related to the intervention.

A retrospective chart review was conducted one month after the implementation of the interventions to determine the intervention's impact on suicide screening rates and suicide risk detection rates among teenagers aged 13-18 years. Patient records are comprehensive and valuable data sources and serve as the gold standard for quality improvement projects as they provide valuable insights into demographics, variables and other treatment and assessment aspects (Linehan et al., 2021). Besides, record reviews are less intrusive to patients (Linehan et al., 2021).

Since the outpatient mental health clinic does not currently use a validated suicide screening, the focus was crucial for initial screening along with investigation into the need for more comprehensive interventions. Baseline data that will be collected will include any documentation of suicide risk screening, the resulting risk determination and any related disposition plan. This data will be collected from the records of all eligible appointments of teenage patients seen at the clinic one month before the implementation of the intervention. Eligible appointments included all initial and crisis appointments for adolescents aged 13-18 years. Essentially, data recorded from the patient records have, whether the provider asked the patient any question about suicide, any identified level of suicide risk, and any disposition plans associated with suicide such as referral, safety plan, or follow-up. Post-intervention data included the proportion of eligible adolescent patients seen during the one-month period after the implementation of the intervention, who were screened for suicide either using the ASQ, or asked about suicide risk directly by the provider during the post-intervention phase.

To determine the effect of the intervention on the frequency of suicide screening, the proportion of patients with a documentation of being asked about suicide in their records

during the pre-intervention period will be compared with the proportion of eligible adolescent patients screened for suicide either using the ASQ, or asked about suicide risk directly by the provider during the post-intervention phase. To compare suicide risk detection rates, the proportion of adolescent patients with some sort of suicide risk in their records during the pre-intervention phase will be compared to the proportion of adolescent patients identified at risk of suicide using the ASQ or by documentation by the provider in the EMR in the post-intervention phase.

Measures

The proposed study's primary outcome is to assess the providers' knowledge and skills on suicide prevention and management in teenagers before and after the implementation of the brief suicide training program. The goal will be to assess whether the training will improve provider's suicide-related knowledge and skills including prevention and management of suicide in teenagers. The extent of the knowledge and skills will be assessed using the suicide knowledge and skills questionnaire (SKSQ), which will be administered pre-and post-intervention (Smith et al., 2014). Progress towards this goal will be assessed by comparing the pre-and post-intervention results of the SKSQ survey

Prior to the use of the tool, permission to use and adapt the original survey was acquired via email from its original authors and creators (April R. Smith, Caroline Silva, David W. Covington, and Thomas E. Joiner, Jr). The email explained how the researcher intended to use the tool and parts of the instrument that was used or adapted. The email also explained the parameters of the study and how the instrument was administered. The email also specified that the tool will be reproduced in the appendix section of the project's final manuscript.

The SKSQ has been validated as a measurement of suicide-associated knowledge and perceived skills. It is a 13-item survey questionnaire comprising two components: the suicide

knowledge subscale and the suicide skills subscale (Smith et al., 2014). The suicide

knowledge subscale consists of nine statements in a true or false format that tests participants'

understanding of suicide-related concepts (Smith et al., 2014). In contrast, the suicide skills

subscale assesses healthcare professionals' confidence levels in their training, skills, and

supervision when dealing with individuals at risk of suicide (Smith et al., 2014). Per Smith et

al. (2014), the scores on both subscales effectively differentiate between healthcare

professionals who have received specific training in suicide prevention and those who have

not received any training. A copy of the SKSQ knowledge assessment tool that was used can

be viewed in Appendix A. Participants provided responses using a 5-point Likert scale,

ranging from "completely agree" to "disagree completely" (Smith et al., 2014).

A secondary outcome of the project was to increase the suicide screening rates among the

providers. To evaluate change in this outcome, a retrospective chart audit will be performed

to determine the pre-intervention period screening rate and compare it to the post-intervention

rate.

Analysis

All the collected data was analyzed quantitatively using the Statistical Package for

the Social Sciences (SPSS). Quantitative methods included descriptive and inferential

statistics used to analyze the data collected via the pre- and post-questionnaires to assess the

knowledge and skills of the healthcare professionals about suicide. Descriptive statistics,

including frequencies and percentages, was used to analyze the participants' demographic

data, including age, gender, and profession. Regarding the second section of the questionnaire

(the suicide skills subscale), descriptive statistics, including means, was used to compare the

participants' scores in the pre- and post-intervention questionnaires. For the suicide

knowledge subscale, the overall average percentage of correct responses for each item and

the average percentage of correct responses was compared during the pre- and post-intervention periods.

Ethical Considerations

Hunt et al. (2021) state that each quality improvement project requires rigor and innovation to improve patient care. Ethical standards helped guide the doctoral student nd the staff during intervention implementation. Various ethical considerations must be considered to preserve participants' rights, dignity, and well-being. This section discusses some of the most important ethical concerns and ways of dealing with them, such as the need for a formal ethics review and the possibility of a conflict of interest.

Informed consent

Obtaining the informed consent is a vital ethical obligation. This procedure included informing prospective participants of clear, accurate, and thorough information about the project's goals, possible advantages and dangers, and their right to withdraw from the research at any time without incurring any costs. The participants were allowed to ask questions or concerns before agreeing to anything Consent should be gained in a voluntary and non-coercive way.

Confidentiality and Privacy

Protecting the rights and well-being of participants requires ensuring the confidentiality and privacy of their personal information and data. This necessitates implementing stringent protocols for storing, maintaining, and accessing data. The project did not entail the collection of any personally identifiable data to ensure participant anonymity

Risk-Benefit Assessment

The potential benefits of the intervention(s) should be carefully balanced against the possible risks and burdens for participants. The proposed project has a minimal risk of harm to the participants as it only entails an educational intervention. The project provided various

benefits for the participants, including improving their knowledge and skills on suicide among teenagers.

Formal Ethics Review

Since the project entailed a change in practice, and did not include research or involve patients, the project did not require Institutional Review Board (IRB) approval. However, the primary investigator sought approval from her DNP committee for a statement of non-research determination and adherence to the organization's Health Insurance Portability and Accountability Act (HIPAA) policy. The project qualified for the IRB status as it posed no apparent risk to the research subjects as it only included the implementation of a provider training program. Besides, it will not include the collection or recording of individually identifiable data both for the provider population and the patient population.

Potential Conflict(s) of Interest

It was crucial to identify and resolve conflicts of interest that might have compromised the impartiality of the project's ethics. These involved financial interests, such as funding sources or personal financial benefit, and non-financial interests, such as personal or professional ties with participants or other stakeholders. Any potential conflicts would have been disclosed to the IRB or ethical committee, research team, and participants, and measures would have been taken to minimize any impact on project planning, execution, and data analysis.

Cultural Sensitivity

The initiative considered the participants' and their communities' cultural, ethnic, and socioeconomic diversity. This included identifying and resolving obstacles for participation, including cultural views about suicide. Also, the intervention was administered in English to include all the participants.

Ongoing Ethical Monitoring

Ethical issues were considered throughout the project, from the design and approval to execution and assessment. This included updating the IRB or ethics committee, research team, and participants about concerns on or changes to the project's ethical components and assessing and regularly updating risk–benefit evaluations. The project team also planned to adjust the intervention(s) where needed in light of new knowledge on the efficacy or possible hazards of the intervention or growing ethical issues.

Results

This project's primary aim was to implement an evidence-based suicide training program to enhance suicide-related knowledge and skills among mental health professionals in an outpatient mental health clinic in Nottingham, Maryland. To assess the project's impact, the pre-test and post-test Suicide Knowledge and Skills Questionnaire (SKSQ) was used to assess the knowledge and skills of the participants before and after the intervention was implemented. Implemented over two months, from August to October 2023, the project had three phases: pre-intervention, intervention, and post-intervention. During the pre-intervention period, the participants completed the pre-test SKSQ, which included a demographic survey. During the intervention phase, the DNP student implemented an online training session via a Zoom presentation about teenage suicide prevention. Participants who could not attend the Zoom session were offered a cloud link that allowed them to view at their convivence. About 97% of the participants participated in the live training.   Two weeks after the implementation of the suicide training program, the post-test SKSQ was administered to the participants. A period of one week was allotted to complete the post-test SKSQ. Data collected using the pre-test and post-test SKSQ was analysed using Microsoft Excel. The validity of the collected data ensured that there were no missing data. Participants with missing data were excluded from the analysis.

The project's participants included mental health professionals who provide care to teenage patients at the outpatient care clinic, including mental health nurse practitioners, therapists, social workers, and nurse practitioner students. With surveys with missing data being excluded, there were 80 completed surveys; 39 participants completed the pre-test survey, while 41 completed the post-test survey. Of the participants in the pre-intervention group, 87.2% ($n=34$) were female and 10.3% ($n=4$) were male. One participant in this group preferred not to report their gender. Regarding age, 51.3% ($n=20$) were 40–54 years old, while 33.3% ($n=13$) were aged 25–39 years, and 12.8% ($n=5$) were above 55 years old. One participant (2.6%) was below 25 years. Of the participants' professions, the majority were mental health nurse practitioners ($n=21$, 53.8%). Of the remainder, 7.7% ($n=3$) were therapists, 7.7% ($n=3$) were social workers, and 30.8% were nurse practitioner students.

Of the 41 participants who completed the posttest survey, 75.6% ($n=31$) were female and 22% ($n=9$) were male. One of the participants (2.4%) identifies as non-binary. Most participants were between 25 and 39 years old (n=23, 56.1%) or 40 and 54 years old (36.6%, n=15). Only two participants (4.9%) were above 55, and only one (2.4%) was below 25. Most participants were mental health nurse practitioners ($n=24$, 58.5%). The rest were either therapists ($n=9$, 22.0%), social workers ($n=1$, 2.4%), or nurse practitioner students ($n=7$, 17.1%). Table 1 summarizes the demographic characteristics of the participants by age, gender, and profession.

Table 1

Participant demographics by Age, Gender, and Profession

		Pre. ($n=39$)	Post. ($n=41$)
Characteristics	Categories	n (%)	n (%)
Age	Below 25 years	1(2.6)	1(2.4)

	25–39 years	13(33.3)	23(56.1)
	40–54 years	20(51.3)	15(36.6)
	Above 55 years	5(12.8)	2(4.9)
Gender	Male	4(10.3)	9(22.0)
	Female	34(87.2)	31(75.6)
	Non-binary	0(0.0)	1(2.4)
	Prefer not to say	1(2.6)	0(0.0)
Profession	Mental health NP	21(53.8)	24(58.5)
	Therapist	3(7.7)	9(22.0)
	Social worker	3(7.7)	1(2.4)
	NP student	12 (30.8)	7(17.1)

The primary objective of the project was to evaluate the impact of the suicide training program on the participants' knowledge about suicidal behavior and their comfort in dealing with suicidal teenagers, which was assessed using the Suicide Knowledge and Skills Questionnaire (SKSQ). The SKSQ was administered pre and post the suicide training program to determine the impact of the intervention. The survey comprises two sections, including the suicide knowledge subscale and the suicide skills subscale (Smith et al., 2014).

The first section, the suicide knowledge subscale, consisted of nine true-or-false statements that tested participants' understanding of suicide-related concepts (Smith et al., 2014). The participants answered 66.1% of the questions in this section correctly in the pre-test SKSQ. Following the implementation of the suicide training intervention, the participants answered 70.7% of the questions in this section correctly, suggesting an improvement in suicide-related knowledge. These findings indicate that the suicide training program had an impact on the knowledge of mental health professionals about suicidal behavior. Figure 1 is a bar graph that summarizes these results.
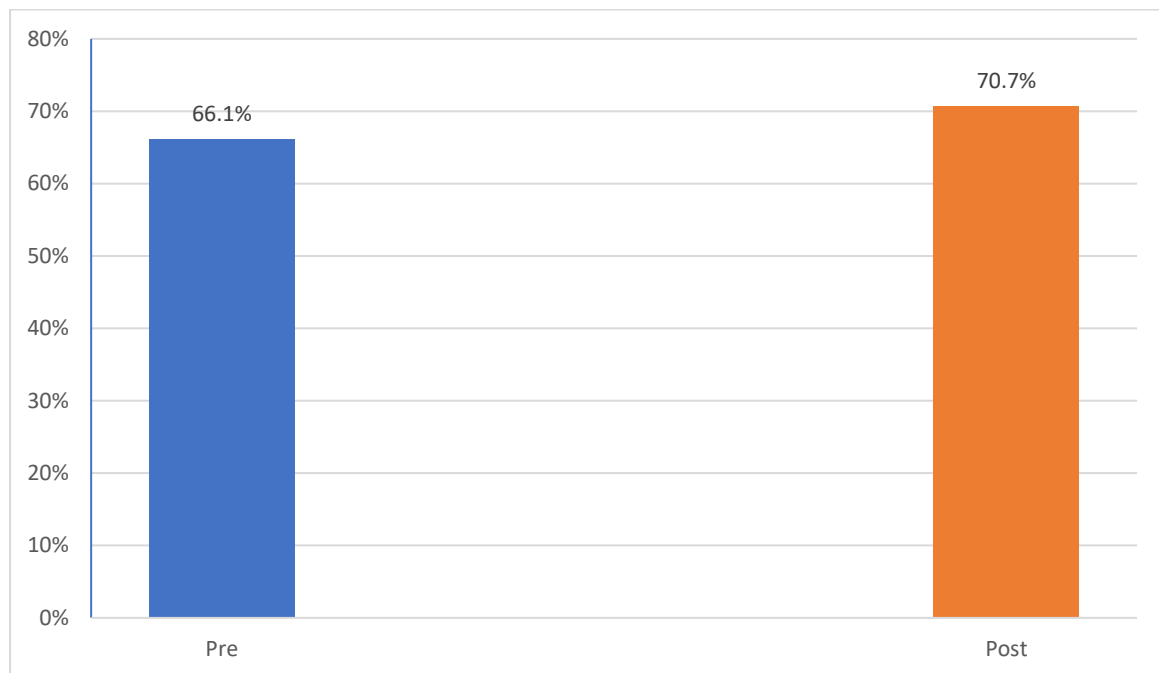
Figure 1

Mean percentage in section 1 on SKSQ items answered correctly pre- and post-training

The responses of the participants to the first section of the SKSQ pre- and post-intervention were examined item by item to provide a more detailed assessment of the participants' knowledge of facts about teenage suicide before and after the intervention. Table 2 presents the results of section 1 on the pretest and post-test SKSQs, comparing the percentages of correctly answered questions. The table shows higher numbers of participants who provided correct answers in the post-test than in the pre-test for questions 1 (48.8% vs. 41.0%), 3 (97.6% vs. 92.3%), 4 (90.2% vs. 79.5%), 5 (100.0% vs. 94.9%), 6 (100.0% vs. 84.6%), 7 (92.7% vs. 61.5%), and 8 (100.0% vs. 66.7%). Nonetheless, the percentage of participants who provided correct answers for question 2 (2.4% vs. 25.6%) and question 9 (4.9% vs. 48.7%) declined in the post-test.

Table 2

Suicide knowledge and skills questionnaire, section 1, pre-intervention, and post-intervention

item-by-item comparison of percentage of correct responses

	Pre		Post	
	n	*%*	*n*	*%*
1. True or false? Few people want to kill themselves.	23	41.0	20	48.8
2. True or false? Youth ages 10–24 have a significantly greater risk of committing suicide than individuals ages 65 and older.	10	25.6	1	2.4
3. True or false? The rate of suicide among those with a severe mental illness is six times that of the general population.	36	92.3	40	97.6
4. True or false? If a person is serious about suicide, there is little that can be done to prevent it.	31	79.5	37	90.2
5. True or false? If you talk to a client about suicide, you may inadvertently give them permission to seriously consider it.	37	94.9	41	100.0
6. True or false? Depression indicates a suicide risk.	33	84.6	41	100.0
7. True or false? Suicide is always unpredictable.	24	61.5	38	92.7
8. True or false? Suicidal people want to die.	26	66.7	41	100.0
9. True or false? Individuals with borderline personality disorder frequently discuss or attempt suicide but do not really intend to kill themselves; instead, they intend to provoke or manipulate others.	19	48.7	2	4.9

The second section of the SKSQ, the suicide skills subscale, was used to assess the

participants' confidence levels in their training, skills, and supervision when dealing with

individuals at risk of suicide. This section comprised four items rated on a five-point Likert

scale (1, completely agree, to 5, completely disagree). The first item in this section of the

SKSQ states, "I have received the training I need to engage and assist those with suicide."

Before the training, 87.2% (*n*=34) of the participants agreed that they had sufficient training

to assist patients contemplating suicide. After the implementation of the intervention, 97.6%

(*n*=40) agreed that they had sufficient training to engage with and assist patients

contemplating suicide. The second item in this section states, "I have the skills I need to

engage those with suicidal desire and/or intent." Before the training, 74.4% (*n*=29) of the

participants agreed that they had the skills required to engage with patients with suicidal

desire. After the training, 97.6% (*n*=40) agreed they had the required skills to engage with

patients with suicidal ideations. The third item in this section states, "I have the

support/supervision I need to engage and assist those with suicidal desires." During the

pretest, 82.1% (*n*=32) agreed, while during the posttest, 97.6% *(n*=40) completely agreed that

they had the support they needed to engage with patients with suicidal desires. The fourth

item in this section states, "I am comfortable asking direct and open questions about suicide."

The number of participants who agreed that they were comfortable asking patients direct and

open questions about suicide was slightly higher in the pretest (97.6%, n=40) than in the

posttest (97.4%, *n*=38). However, more participants completely agreed in the posttest than in

the pretest (95.1% versus 33.3%).

  The responses of the participants to the second section of the SKSQ pre- and post-

intervention were examined item by item to provide a more detailed assessment of their

perception of their comfort/confidence in the training, skills, and supervision they received.

Based on the five-point Likert scale, higher mean scores indicate a higher overall agreement

in the participants' perception regarding comfort/confidence. The overall average mean score

of the participants on the four items before the implementation of the suicide training

program was 4.0. After the implementation of the intervention, the overall average mean

score of the participants on the four items was 4.9, indicating an improvement in the

participants' confidence in and comfort with their skills and the support that they received.

Table 3 shows the pre-test and post-test mean scores of the participants in each of the four

items.

Table 3

Suicide knowledge and skills questionnaire, section 2, pre- and post-intervention comparison

of individual item mean scores

Question	Pre-test Mean Score	Post-test Mean Score
I have received the TRAINING I need to engage and assist those with suicide desire/intent	4.1	4.9
I have the SKILLS I need to engage those with suicidal desire and/or intent	3.7	4.9
I have the SUPPORT/SUPERVISION I need to engage and assist those with suicidal desires	3.9	4.8
I am comfortable asking direct and open questions about suicide	4.3	4.9

As presented in Table 3, in the post-test, the participants were more likely to agree that they had the necessary training (4.9 versus 4.1), skills (4.9 versus 3.7), and support/supervision to engage and assist those with suicidal desire (4.8 versus 3.9). Additionally, in the post-test, the participants were more likely to agree that they were comfortable asking direct and open questions of patients about suicide (4.3 versus 4.9).

Discussion

The results of this DNP project showed that the evidence-based suicide-prevention training program was effective in improving the mental healthcare professionals' suicide-related knowledge and skills The training was done via zoom and the session was recorded on cloud. The cloud link was shared with those who were not able to attend the live session so they could watch at a convenient time. Majority of the participants, about 97%, attended the live training. In general, the participants' scores on the two sections of the SKSQ improved after implementing the training program (compared to the baseline). After implementing the intervention, the participants' knowledge about suicide-related concepts

and myths improved, as evidenced by an improvement in the average percentage of questions they answered correctly on the suicide-knowledge subscale of the SKSQ. During the post-test, the participants answered 70.7% of the questions correctly compared to 66.1% in the pre-test.

However, the pre-test scores showed that a smaller proportion of participants did not know the entrenched myth about discussing suicide with a patient meaning that the clinician inadvertently permits them to seriously consider it. Findings showed that training healthcare providers about suicide myths and concepts helps them debunk such myths and improve their suicide-related knowledge. After implementing the intervention, a higher percentage of participants understood that discussing suicide with a patient does not mean that the clinician inadvertently permits them to seriously consider it or that suicide is predictable and preventable. Furthermore, all participants knew that depression is a risk factor for suicide and that suicidal people do not always want to die. This can be seen in Table 2; SKSQ pre and post intervention item by item comparison of percentage of correct responses. There is a 100% increase in correct answers by the participants post- intervention

Results also showed that the training program positively affected the participants' suicide-related skills, including their confidence in their skills and the training and supervision they had received. The percentage of participants who reported receiving the necessary training and supervision to engage with suicidal patients increased from 87.2% in the pre-test to 97.6% in the post-intervention. A lack of training is a major concern among mental health professionals, given their frequent clinical contact with teenagers at risk of suicide. Consistent with previous findings, suicide-related training was associated with more confidence in suicide-related skills and an enhanced sense of support when engaging with suicidal patients. (Pompili et al., 2017). More participants in this post-test reported having the required skills (97.6% versus 74.4%) and the supervision/support (97.6% versus 82.1%)

to engage with suicidal patients. This may be explained by the fact that suicide-related training improved their confidence in their skills, thus leading to a greater sense of support in engaging with patients with suicidal desires.

Interpretation

The outcomes of this intervention underscore the importance of evidence-based training programs in equipping mental health professionals with the knowledge and skills to address the complex issue of suicide. A 2020 study has revealed several challenges that emerge during suicidal case treatment, including insufficient resources, staff proficiency issues, and limited access to formal or organized post-suicide mental health programs for healthcare workers (Lundin & Bergenheim, 2020). These challenges indicate the necessity of resources and programs that empower Mental Health practitioners.

The results from the study after implementing the intervention showed that the overall average mean score of the participants on the four items of the second phase increased to 4.9 from 4.0, indicating an improvement in the participants' confidence and comfort in their skills and the support they received. After learning about the support they needed, the practitioners could coordinate care and make sure the patients receive the adequate care they need. The participants realized that they were obligated to refer these patients to the hospital. Giving medical practitioners evidence-based training is useful in showing them that they have a great support system that can help them handle the suicide cases they receive in their line of duty. The confidence was evidenced by the positive response from the third item in the second section, "I have the support/supervision I need to engage and assist those with suicidal desires," which changed from 82.1 % (n=32) to 97.6% (n=40) of those who completely agreed they had the support needed to engage patients with suicidal desires.

Limitations

Despite the favorable outcomes, there are certain limitations associated with this project Since the study was implemented in a specific site for a limited number of people, it became difficult to derive results applicable to a broader setting like the emergency room or Hospital. Such an outcome could be problematic if it does not apply in different setting. Moreover, using self-reports, although commonly used in such studies, exposes a risk of social desirability response bias. It is possible that the participants crafted their responses based on what they may perceive as expected and not giving completely true answers.

Other limitations include the short-term duration of the project and the absence of long-term follow-up assessments. A longer study, including subsequent assessment, might shed light on how the training's influence persists in time. The project lacked a formal and in-depth data analysis, and consequently, the statistical significance of the changes in awareness and knowledge remains unestablished. However, it is noteworthy that there was some analysis conducted by a statistician, although it was limited in scope. While a comprehensive statistical examination was not undertaken, the involvement of a statistician does add a layer of credibility to the data interpretation, albeit within certain constraints.

In addition, the application of just one training mode (online sessions through Zoom exclusively) could fail to accommodate varied learning styles. In future studies, however, the use of the blended learning strategy combining interactive workshops and case-based discussions may be explored for improvement. The rationale behind such an approach is to increase the involvement of participants, which would include different kinds of learners.

Conclusion

The project showed improvements in enhancing knowledge (Table 2), and skills(Table 3), when dealing with suicidal behavior, particularly in adolescents. Following the comprehensive analysis with the Suicide Knowledge and Skills Questionnaire, the study

showed a great rise in participants' ability to understand conceptions related to suicide and a high degree of confidence. This emphasizes the need for specialized training material, coupled with continued revision, to tackle different knowledge gaps exposed by item analysis. Moreover, the project increased suicidal knowledge with a good impact on the confidence and comfort of participants about complex issues. Related studies underscore the need for empowerment of mental health professionals with evidence-based training on how to tackle perceptual barriers associated with suicide. Such training programs can potentially foster positive patient outcomes, including increasing suicide risk screening rates and reducing teenage suicide rates and attempts. Since this project did not investigate the training program's impact on patient outcomes, further exploration is necessary to determine whether such interventions can potentially reduce teenage suicide and suicidal attempts.

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Appendices

Appendix A:

Suicide Knowledge and Skills Questionnaire (Pre and post -Survey)

(Smith, Silva, Covington, & Joiner, 2013)

Suicide Knowlede: Please answer Yes or NO

1. Few people want to kill themselves.

2. Youth ages 10-24 have a significantly greater risk of suicide than individuals aged 65 and older.

3. The rate of suicide among those with severe mental illness is 6 times the general population.

4. If a person is serious about suicide, there is little that can be done to prevent it.

5. If you talk to a client about suicide, you may inadvertently give them permission to seriously consider it.

6. Depression indicates a suicide risk.

7. Suicide is always unpredictable.

8. Suicidal people want to die.

9. Individuals with Borderline Personality Disorder frequently discuss or gesture suicide but do not really intend to kill themselves; instead they intend to provoke or manipulate others.

Suicide Skills

Please rate your agreement with the following statements using this scale:

Completely Disagree = 1 Disagree = 2 Don't know = 3 Agree = 4 Completely Agree = 5

1. I have received the TRAINING I need to engage and assist those with suicidal desire and/or intent.

2. I have the SKILLS I need to engage those with suicidal desire and/or intent.

3. I have the SUPPORT/SUPERVISION I need to engage and assist those with suicidal desire and/or intent.

4. I am comfortable asking direct and open questions about suicide.

Appendix B: Ask Suicide-Screening tool

NIMH TOOLKIT

asQ — Suicide Risk Screening Tool
Ask Suicide-Screening Questions

Ask the patient:

1. In the past few weeks, have you wished you were dead?   ○ Yes   ○ No

2. In the past few weeks, have you felt that you or your family
   would be better off if you were dead?   ○ Yes   ○ No

3. In the past week, have you been having thoughts
   about killing yourself?   ○ Yes   ○ No

4. Have you ever tried to kill yourself?   ○ Yes   ○ No

   If yes, how? _____
   _____
   _____

   When? _____
   _____

*If the patient answers **Yes** to any of the above, ask the following acuity question:*

5. Are you having thoughts of killing yourself right now?   ○ Yes   ○ No
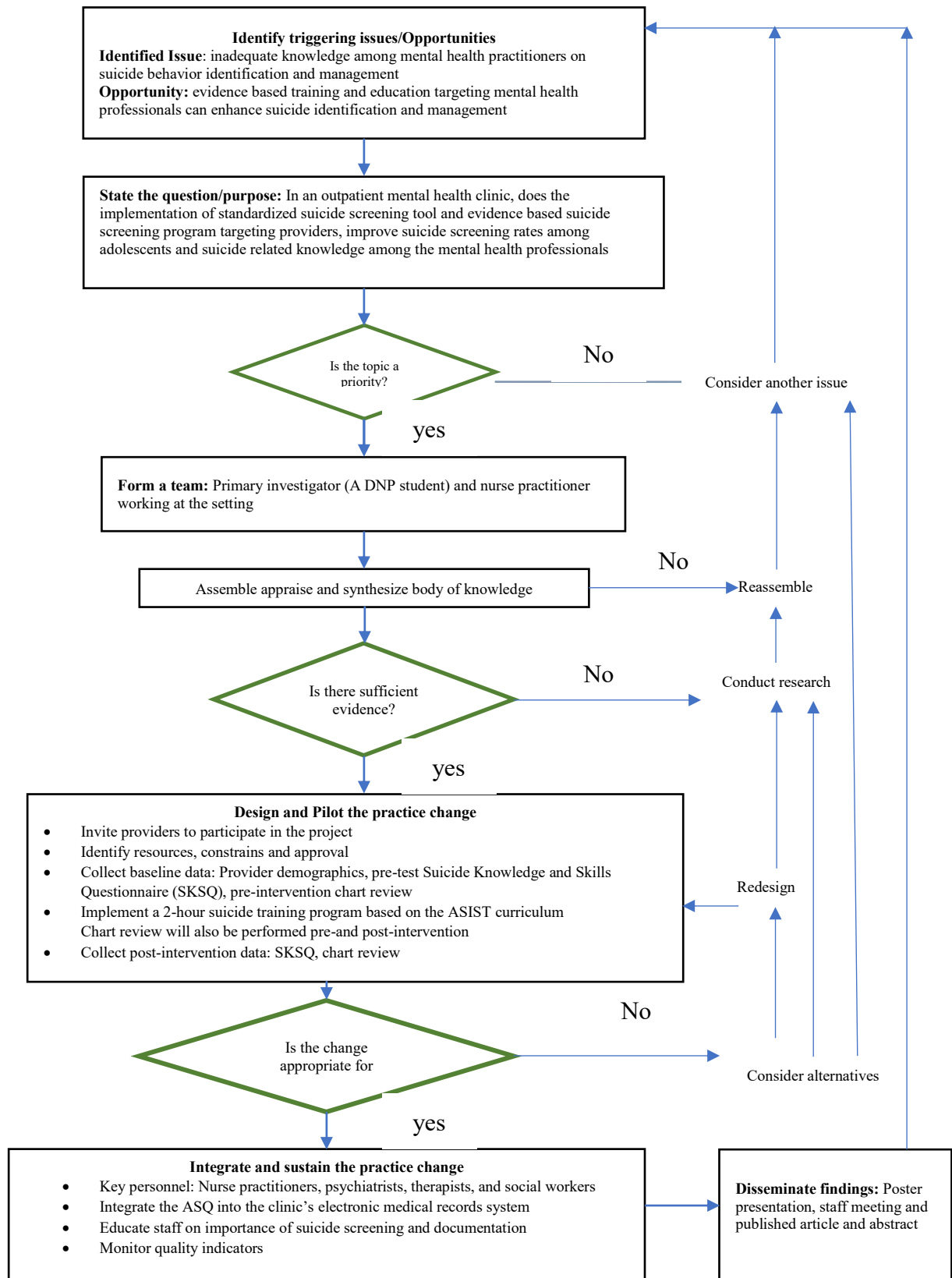
   If yes, please describe: _____

Next steps:

- If patient answers "No" to all questions 1 through 4, screening is complete (not necessary to ask question #5).
  No intervention is necessary (*Note: Clinical judgment can always override a negative screen*).
- If patient answers "Yes" to any of questions 1 through 4, or refuses to answer, they are considered a
  positive screen. Ask question #5 to assess acuity:
  - ☐ "Yes" to question #5 = **acute positive screen** (imminent risk identified)
    - Patient requires a STAT safety/full mental health evaluation.
      Patient cannot leave until evaluated for safety.
    - Keep patient in sight. Remove all dangerous objects from room. Alert physician or clinician
      responsible for patient's care.
  - ☐ "No" to question #5 = **non-acute positive screen** (potential risk identified)
    - Patient requires a brief suicide safety assessment to determine if a full mental health evaluation
      is needed. Patient cannot leave until evaluated for safety.
    - Alert physician or clinician responsible for patient's care.

Provide resources to all patients

- 24/7 National Suicide Prevention Lifeline 1-800-273-TALK (8255) En Español: 1-888-628-9454
- 24/7 Crisis Text Line: Text "HOME" to 741-741

asQ Suicide Risk Screening Toolkit   NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH)

Appendix C: IOWA model for Evidence Based Practice

Identify triggering issues/Opportunities
Identified Issue: inadequate knowledge among mental health practitioners on suicide behavior identification and management
Opportunity: evidence based training and education targeting mental health professionals can enhance suicide identification and management

State the question/purpose: In an outpatient mental health clinic, does the implementation of standardized suicide screening tool and evidence based suicide screening program targeting providers, improve suicide screening rates among adolescents and suicide related knowledge among the mental health professionals

Is the topic a priority?

No → Consider another issue

yes

Form a team: Primary investigator (A DNP student) and nurse practitioner working at the setting

Assemble appraise and synthesize body of knowledge

No → Reassemble

Is there sufficient evidence?

No → Conduct research

yes

Design and Pilot the practice change
- Invite providers to participate in the project
- Identify resources, constrains and approval
- Collect baseline data: Provider demographics, pre-test Suicide Knowledge and Skills Questionnaire (SKSQ), pre-intervention chart review
- Implement a 2-hour suicide training program based on the ASIST curriculum
  Chart review will also be performed pre-and post-intervention
- Collect post-intervention data: SKSQ, chart review

Redesign ←

Is the change appropriate for

No → Consider alternatives

yes

Integrate and sustain the practice change
- Key personnel: Nurse practitioners, psychiatrists, therapists, and social workers
- Integrate the ASQ into the clinic's electronic medical records system
- Educate staff on importance of suicide screening and documentation
- Monitor quality indicators

Disseminate findings: Poster presentation, staff meeting and published article and abstract

Appendix D: Permission to Use and Adapt SKSQ Questionnaire

Re: [EXT] Permission to Use and Adapt SKSQ Survey

From: April Smith (ars0152@auburn.edu)

To: clarakez@yahoo.com

Date: Tuesday, September 19, 2023 at 07:23 AM EDT

Hi Clara,

You have my permission to use the scale. It can be found here: https://www.redslab.org/measures

---
April R. Smith, Ph.D. (she/her/hers)
Department of Psychological Sciences
Office: 227 Cary Hall
Auburn University, AL 36849-9027
Director, Research on Eating Disorders and Suicidality (REDS) Lab
Co-Director, Auburn Eating Disorders Clinic (AEDC)

From: clara abit` <clarakez@yahoo.com>
Date: Monday, September 18, 2023 at 10:06 PM
To: April Smith <ars0152@auburn.edu>
Subject: [EXT] Permission to Use and Adapt SKSQ Survey

CAUTION: Email Originated Outside of Auburn.

Date: 9/18/23

Dear Sir/Madam,

Re: Permission to Use and Adapt SKSQ Survey

My name is Clara Abit. I am a DNP student studying at the University of New Hampshire.

As part of my doctoral degree fulfillment, I intend to conduct a quality improvement research project in which your survey questionnaire, the Suicide Knowledge and Skills Questionnaire (SKSQ), will be the data collection instrument in my proposed project. Therefore, I am contacting you to request permission to use and adapt the survey questionnaire to my project.

The project aims to implement quality improvement based on the healthcare provider's knowledge and experiences. Your complete SKSQ will be used to explore the healthcare providers' knowledge regarding

suicidal behavior and their perceived competence in suicidal patients' management. It will be used to conduct pre-intervention and post-intervention surveys.

The SKSQ will be used in the pre-intervention survey to inform educational materials design and creation as a suicide behavior intervention, which entails educating and training to achieve the quality improvement goal. The goal is to improve healthcare providers' suicide and suicide-related knowledge and skills and suicide behavior management competence. The SKSQ will also be used in the post-intervention assessment – assessing whether the project goal has been achieved.

The SKSQ will be administered via email. It will be sent in an email to the study participants; they will return the completed questionnaire via email. The primary outcomes the SKSQ will assess include the healthcare providers' suicide-related knowledge and suicide-prevention and management knowledge, skills, and competence. The secondary assessments include an increase in suicide screening rates among healthcare providers.

I would also appreciate your giving me access to copies of the supplemental materials. That includes the standard instructional material that will assist me in administering your instrument and analyzing the data gathered with it. Furthermore, I request your permission to reproduce the SKSQ in my project report/thesis Appendix that will be published in my institutional repository at **https://scholars.unh.edu/** .

Error! Filename not specified.Error! Filename not specified.Error! Filename not specified.I pledge not to use your instrument for any financial benefit other than the proposed quality improvement project. If you do not control the instrument's copyright, I would appreciate any information you could provide regarding the person or organization I have to contact for permission. If the terms and conditions of this request are acceptable to you, please indicate by replying via my email address clarakez@yahoo.com

Error! Filename not specified. Sincerely,

Clara Abit

Appendix E

Participant Invitation Letter

September 25, 2023

RE: Invitation to attend a presentation on teenage suicide risk assessment and management for Mental health Professionals.

Dear Colleagues,

I am inviting you and other colleagues to participate in a training session on Teenage Suicide Assessment and Management Training for Mental Health Professionals. This activity is part of my Doctor of Nursing Practice program project at the University of New Hampshire. The topic is " Suicide Assessment and Management Training for Mental Health Professionals." This one-two-hour session will be conducted via Zoom on Monday, October 9th, between 5 pm to 7 pm. There is a pre-survey questionnaire that will take between 3 to 7 minutes to complete. I kindly ask that it be completed before the Zoom session. In addition, please complete the post-survey within one week after the Zoom session. A cloud link to this presentation will be provided for those who are interested but could not join in live due to one reason or the other. I will also email my slide upon request to anyone who might be interested.

The teaching session is based on evidence-based information/knowledge, and it is intended for mental Nurse Practitioners, individual therapists, social workers, Mental health Nurses, and Mental health nurse practitioner students. I anticipate a total of at least 40 participants

The specific aim of this project is to improve knowledge and skills about suicidal behavior identification and management that can allow healthcare professionals to better identify at-risk teenage patients and increase suicide prevention efforts. Evidence-based suicide training programs for healthcare providers improve their knowledge of suicidal behavior and enhance their skills in managing suicidal individuals. Suicide has been a major public health concern among teenagers. Mental health professionals can play a major role in identifying teenagers at risk of suicide and implementing evidence-based suicide prevention interventions. However, inadequate knowledge of the signs and risk factors of suicide affects their capacity to recognize teenagers at risk. Thus the reason for this training.

If you intend to claim credit for participating, please contact your supervisor. There is no compensation, monetarily or otherwise. However, since this session is tailored towards clinical staff like you, I am confident it will benefit you and your patients, hence a quality improvement project. It will be a pleasure to have you on board, and I hope you accept this invitation to attend this training session and complete the pre- and post-questionnaires.

N.B; At any point in time, if you want to withdraw from participating, you are free to do so. Also, keep in mind that confidentiality and privacy are assured.

Please feel free to email me at clarakez@yahoo.com with any questions or concerns.

Thank you,

Clara Abit

Doctor of Nursing Practice Candidate

University of New Hampshire

Appendix F

Informed Consent

Title: Teenage Suicide Risk-Assessment and Management Training

Project Lead: Clara Abit, CRNP-PMH

Affiliation: University of New Hampshire School of Nursing, Phaze Counseling Services, llc

Purpose of study: To identify problems related to insufficient knowledge about suicide management and design interventions to improve suicide-related knowledge, skills, and screening rates.

Procedures: Pre and post-questionnaires of mental health professionals; an educational session will be done after the pre-questionnaire.

Risks: None, as there will be no procedures. The project will entail anonymous questionnaires.

Benefits: There will be no financial, material, or tangible benefits. However, participation will potentially enhance suicide assessment and management skills.

 Confidentiality: The questionnaires and the entire project shall be strictly confidential. No personal opinions or information will be divulged. HIPPA guidelines will be strictly complied. No unique identifiers to include names and social security numbers should be written on the Questionnaires.

Contact Information: Questions or information about this study should be directed to the project lead at clarakez@yahoo.com.

Voluntary Participation: Your participation in this survey is voluntary. If you choose to opt out at any time, feel free to do so without giving any reason.

I have read and understood the provided information and have had the opportunity to ask questions. I know that my participation is voluntary and that I can withdraw at any time without giving a reason or cost. I voluntarily agree to take part in this project.

 Participant's Signature _____ Date _____

Project Lead signature _____ Date _____

TEENAGE SUICIDE PREVENTION TRAINING

PRESENTED BY: Clara Abit

PRESENTATION ROADMAP

❖Definitions
❖An Overview of Suicide
❖Teen Suicide Statistics
❖Risk and protective factors for suicide
❖suicide and mental disorders
❖Warning signs of suicide
❖The Myths & Facts of Suicide
❖Suicide Prevention
❖Suicide Screening and assessment
❖ASIST Pathway to Life Model

DEFINITIONS

- **Suicide** is defined as death caused by self-directed injurious behavior with intent to die as a result of the behavior.
- A **suicide attempt** is a non-fatal, self-directed, potentially injurious behavior with intent to die as a result of the behavior. A suicide attempt might not result in injury.
- **Suicidal ideation** refers to thinking about, considering, or planning suicide

(Perrotta, 2020)

OVERVIEW OF SUICIDE

- Suicide and and suicide attempts are serious public health issues both nationally and globally (WHO, 2019).
- Suicide is a leading case of death globally
  - Globally, more than 1 million people die annually by suicide
- In the US, suicide is a leading cause of death
  - More than 48,000 Americans died by suicide in 2021 (I death every 11 mins)
- An estimated 12.3 million Americans seriously thought about suicide, 3.5 million made a plan, and 1.7 million attempted suicide.
- Suicide rates increased approximately 36% between 2000–2021 in the US

(CDC, 2023; WHO, 2019)

TEEN SUICIDE

- Teenagers and young adults account for around 15% of all suicide deaths (11.0 per 100,000)
- Despite having a lower suicide rate:
  – Suicide is **2nd leading cause of death** among teenagers (7,126 deaths)
  – Suicide rates in this age group have been increasing at a higher rate (Increased 52.2% between 2000-2021)
- More teenagers die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia, influenza, and chronic lung disease, **COMBINED**

(CDC, 2023; Martínez-Alés et al., 2022)

RISK AND PROTECTIVE FACTORS FOR SUICIDE

- **Risk Factors:** These are long standing conditions, stressful events or situations that may increase the likelihood of a suicide attempt or death.
- **Protective Factors:** These are positive conditions, personal & social resources that promote resiliency and reduce the potential of suicide and other high-risk behaviours.
- Risk and protective factors for suicide can be envisioned through the lens of resiliency theory
  – Resiliency theory: States that suicide is a complex behavior that is influenced by the dynamic interplay of multiple risk and protective factors.

(Perrotta, 2020; Romanelli et al., 2022)

RISK AND PROTECTIVE FACTORS

- Risk and protective factors for suicide occur along the social ecology continuum that includes:
  - **Individual factors**: Encompass a person's biology, psychology, and social history
  - **Relationship factors:** Include hurtful or positive experiences within a person's relationships that contribute to or reduce risk for suicide
  - **Cultural/environmental factors**: These are cultural and environmental factors within the larger society or community challenging issues within a person's community contribute to risk.
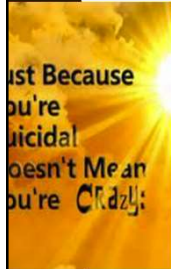
    (Holman & Williams, 2022; Wasserman et al., 2021)

Concentric Circles of the Social Ecology Contin
(WHO,2014)

RISK FACTORS	PROTECTIVE FACTORS
Individual	**Individual**
• Mental disorder especially depression • Previous suicide attempt • Alcohol or substance use • Hopelessness • Intense stress • Serious illness such as chronic pain • Aggressive or impulsive behavior • Criminal/legal problems • History of adverse childhood experiences	• Effective coping skills • Social problem-solving skills • School success • School success
Relationship	**Relationship**
• Physical, psychological or sexual abuse • Physical or sexual assault • Loss of important relationships • Family/loved one's history of suicide • Peer group endorses suicide • Bullying • Lack of support from family • High conflict or violent relationships • Social isolation	• Access to mentors • Family support (parent involvement • Peer group engagement in prosocial behavior • Caring friends • Supportive relationship with mental health and medical providers
Environment	**Environment**
• Discrimination • Historical trauma • Social rejection • Community violence • Access to means of suicide • Stigma associated with mental illness or help seeking • Unsafe media portrayals of suicide	• Effective bully prevention practices • School connectedness • Help-seeking is encouraging • Coordinated community services • Access to mental and health care • Reduced access to lethal means of suicide among people at risk • Cultural, religious, or moral objections to suicide

SUICIDE AND MENTAL DISORDERS

- **Mental illness** is an important risk factor for suicide.
- **90% of people** who die by suicide are suffering from one or more diagnosable psychiatric disorders
- The interplay of multiple diagnoses increases suicidal Risk.
- Evidence shows that people with mental illnesses are at 5-6-fold greater risk for suicide than the general population. Major mental disorders associated with suicide include:
  - **Major Depressive Disorder**
    - Predictive of ideation, but not attempts
    - Lifetime suicide risk 14.6%
  - **Bipolar disorder**
    - Lifetime risk of suicide is estimated to be at least 15.5 times of the general population
  - **Schizophrenia**
    - Suicide risk 8.6 times general population
  - **Substance abuse disorders**
    - Lifetime suicide risk 14%

(Moitra et al., 2021; San To et al., 2019)

SUICIDE AND MENTAL DISORDERS

- **Alcohol abuse**
  - Suicide risk 8.5 times general population
  - Alcohol use and abuse are associated with approximately 25% to 50% of suicides
  - Suicide usually occurs later in the course of the illness with communications of suicidal intent lasting several years
- **Eating Disorders**
  - Suicide risk is 23 times that of general population
- **Anxiety Disorders**
  - 6-10-fold suicide increase over general population
  - Lifetime suicide rate in panic disorder is 7.2% and 8.2 % in obsessive compulsive disorder i
- **Personality Disorders**
  - lifetime suicide rate- 5.1%
  - Cluster B are highest risk group
  - Borderline Personality Disorder: lifetime suicide rate is 8.5%, at least 75% of BPD have made at least 1 suicide attempt

(Moitra et al., 2021; San To et al., 2019)

SUICIDE RISK IN SPECIFIC DISORDERS

Condition	% Lifetime Risk
Prior Suicide Attempts	27.5%
Bipolar Disorder	15.5%
Major Depression	14.6%
Substance Abuse disorders	14.7%
Obsessive-Compulsive	8.2%
Panic Disorder	7.2%
Schizophrenia	6.0%
Personality Disorder	5.1%
Alcohol Abuse	4.2%
General Population	**0.72%**

WARNING SIGNS

Warning Signs: These are the earliest observable signs that indicate the risk of suicide for an individual in the near-term (within minutes, hours or days.)

First Tier: Overt & acute signs of a suicidal crisis

- Teenager **threatening** to hurt or kill themselves
- Teenager **looking for the means** (gun, pills, rope etc.) to commit suicide
- Teenager **talking or writing** about their own death or suicide

(Lee et al., 2023; Moitra et al., 2021)

WARNING SIGNS MNEMONIC

The Mnemonic **IS PATH WARM?** serves as a helpful acronym for identifying the most commonly recognized warning signs of suicide.

- **I** **Ideation**/ threatened or communicated
- **S** **Substance Abuse** / excessive or increased?

- **P** **Purposelessness** / no reasons for living
- **A** **Anxiety** /agitation / insomnia
- **T** **Trapped** / feeling no way out
- **H** **Hopelessness** / nothing will ever change

- **W** **Withdrawal** from friends, family, society
- **A** **Anger** (uncontrolled)/ rage / seeking revenge
- **R** **Recklessness**/ risky acts / unthinking
- **M** **Mood Changes** (dramatic)

SUICIDE: MYTHS AND FACTS

#1

- **Myth:** Asking about suicide will plant the idea in a person's head.
- **Reality:** Asking a person about suicide does not create suicidal thoughts any more than asking about chest pain causes angina. The act of asking the question simply gives the person permission to talk about his or her thoughts or feelings.

#2

- **Myth:** There are talkers and there are doers.
- **Reality:** Most people who die by suicide have communicated some intent. Someone who talks about suicide gives the guide and/or clinician an opportunity to intervene before suicidal behaviors occur.

#3

- **Myth:** If somebody really wants to die by suicide, there is nothing you can do about it.
- **Reality:** Most suicidal ideas are associated with the presence of underlying treatable disorders. Providing a safe environment for treatment of the underlying cause can save a life.

(Strukcinskiene et al., 2019)

MYTHS AND FACTS

#4

- **Myth:** Suicidal people always want to die.
- **Reality**: Many individuals who contemplate suicide are in extreme emotional pain and want the pain to end, not necessarily their lives. They desperately want to live; they are just unable to see alternatives to their problems.

#5

- **Myth**: Suicides happen without warning and is unpredictable.
- **Reality**: There are usually observable warning signs such as changes in behavior and mood

#6

- **Myth**: It's not a big problem, suicide is not all that common?
- **Reality**: Suicide is a major public health problem affecting thousands of people

(Strukcinskiene et al., 2019)

SUICIDE PREVENTION

SUICIDE PREVENTION

SUICIDE PREVENTION

- Suicide represents a worst case failure in mental health care. Healthcare providers must work to make it a **'never event'** in systems of care
- Suicide prevention is a core responsibility for behavioral health care systems
- However, many licensed clinicians are not prepared
    - 39% report they don't have the skills to engage and assist those at risk for suicide
    - 44% report they don't have the training

STOP! SUICIDE

SUICIDE PREVENTION

- Adolescents at risk for suicide are falling through the cracks in our health care system
- Evidence shows that in the month before their death by suicide:
  - Half saw a general practitioner
  - 30% saw a mental health professional
- In the 60 days before their death by suicide:
  - 10% were seen in an emergency department

WHAT WORKS

SUICIDE SCREENING AND ASSESSMENT

- Suicide screening and assessment are essential components of a comprehensive suicide prevention program
- Both screening and assessment to accurately predict people who may be at risk of suicide

Screening vs. Assessment: What's the difference?

- Suicide Risk Screening
  - Identify individuals at risk for suicide
- Suicide Risk Assessment
  - Comprehensive evaluation
  - Confirms risk
  - Estimates imminent risk of danger to patient
  - Guides next steps

(SPRC. 2019)

IMPORTANCE OF STANDARDIZED SUICIDE RISK ASSESSMENT

Improves identification of high risk patients relative to clinical interview

Increases reliability (across time and clinicians)

Facilitates inter-clinician communication

Helps target intervention efforts

Supports ongoing assessment of recurring patients

Meets Joint Commission and National Patient Safety Goals
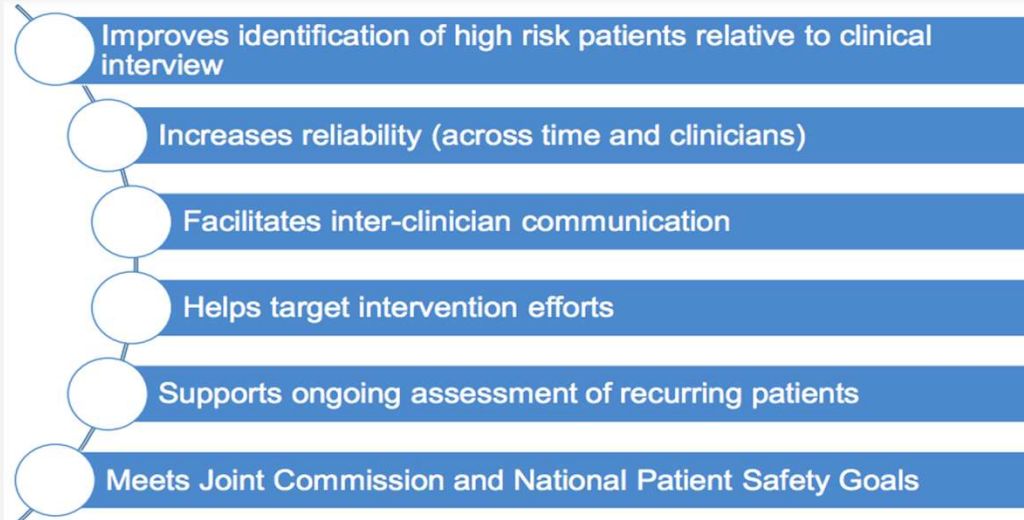
SUICIDE SCREENING: ASK SUICIDE QUESTIONS(ASQ)
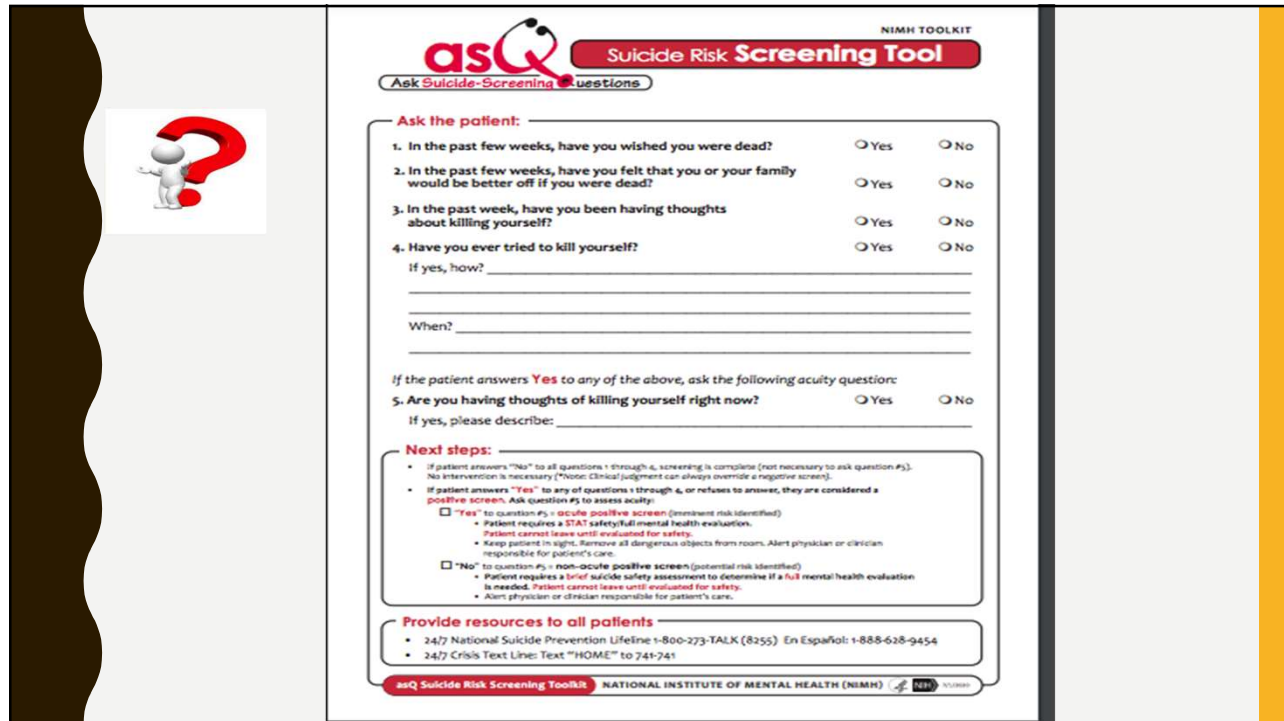
- Brief screening tools can identify individuals at risk for suicide more reliably than leaving the identification up to a clinician's personal judgment
- Research-based screening and assessment tools are available for use in multiple settings.

NIMH Ask Suicide Questions(ASQ)

- Is a Brief Safety Assessment tool; takes around 20 seconds to administer
- Comprises of 5 screening questions
    - 4 initial questions: Major suicide risk factors including suicidal ideations, perceived burdensomeness on others, and past history of suicidal attempts
    - 1 follow-up question if any response to Q1-Q4 is YES: An acuity question to assess for active suicidal ideations.
- Next Steps Recommendations
- Resource guide to share with patients and their families

(Aguinaldo et al., 2021; Horowitz et al., 2020)

ASK SUICIDE QUESTIONS(ASQ)

Start by administering the first 4 questions.

- **Potential ASQ Outcomes**
  - **Negative screen**
    - If patient answers **"No"** to all questions 1-4
    - **Next Step:**
      - Screening is complete (not necessary to ask question #5)
      - No intervention is necessary
  - **Note: However clinical judgment can always override a negative screen.**

(Aguinaldo et al., 2021; NIMH, n.d)

ASK SUICIDE QUESTIONS(ASQ)

Positive screen

- If patient answers **"Yes"** to any of questions 1-4, or refuses to answer
- Ask question #5 to assess acuity
    - **Acute positive screen: "Yes"** to question #5 **(imminent risk identified).**
    - **Next Step:**
        - Patient requires a STAT safety/full mental health evaluation
        - Patient cannot leave until evaluated for safety.
        - Patient should be kept in sight. Remove all dangerous objects from room.
        - Alert physician or clinician responsible for patient's care.
    - **Non-acute positive screen**: **"No"** to question #5 **(potential risk identified)**
    - **Next Step:**
        - Patient requires a brief suicide safety assessment to determine if a full mental health evaluation is needed
        - Patient cannot leave until evaluated for safety.
        - Alert physician or clinician responsible for patient's care.

(Aguinaldo et al., 2021; NIMH, n.d)

YOUTH SUICIDE SCREENING PATHWAY

ASIST Pathway for Assisting Life (PAL) Model

The Pathway for Assisting Life (PAL) has three phases:

- **Connecting** with Suicide: exploring invitations/the signs and asking about whether the person is contemplating suicide.
- **Understanding** Choices: Listening to their story and understanding why they are contemplating suicide and not devaluing their decisions.
- **Assisting Life**: Develop a safe plan with the individual and confirm the action and follow through of this plan.

CONNECTING PHASE

Explore invitations

- Invitations are signs of distress that invite help
- Reach out to the patient, invite them to talk to you and explore what they are thinking feeling or experiencing
- Use the IS PATH WARM MODEL to identify Warning signs
- Explore: Actions, Thoughts, Feelings, stressful events

Ask

- Ask questions about suicide directly
- Examples
  - "Are you thinking of killing yourself."
  - "Do you have a plan to harm your self"
  - "Dou you have thoughts of death"
- If the client is ambivalent or vague, continue to ask directly

UNDERSTANDING PHASE

Focus:

- To understand the reasons, the person of feeling as they are
  - Task: listen, ask about resins for living and dying
- To assess the risk the person will follow through with suicide
  - Task: ask direct questions about suicidal thoughts, plan and intent\

How to Ask and Listen

- Show the person that you are following what they are saying
- Accept their situation for what it is
- You are not passing judgment
- Let them know that their situation is serious and deserving of attention
- Acknowledge their feelings
- Let him or her know you are there to help

UNDERSTANDING PHASE

How to be sure that you understood

- **Understand reason for dying**: Example: I know you feel alone since you lost your wife and you feel its never going to be better, that must be pretty difficult to deal with every day
- **Explore reasons for living:** if you could change one thing out of this situation beside the fact that your wife would be alive, what would it be? How can you make that happen?

ASSISTING LIFE PHASE

- Risks that are identified become the basis for a safety plan

Major focus of the Assisting phase

- To create a safety plan
  - Task: establish a contract (oral)
- To set stage for commitment
  - Task: follow-up with the person; they need to feel connected

Safety Planning Hints

- If harm to self is occurring or about to occur- Activate emergency response. Call 911
- Go to the nearest emergency department
- Call 988 suicide crisis Hotline
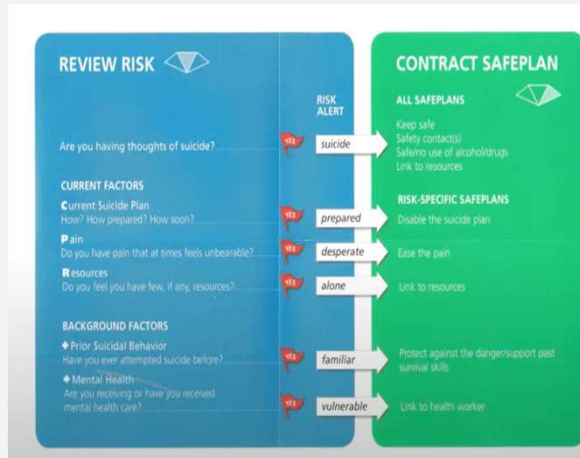
THANK YOU!!

QUESTIONS??

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