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Improving Nursing Attitudes Toward Suicide Prevention in the Emergency Department: the Implementation of an Adolescent Suicide Risk Screening Tool

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**IMPROVING NURSING ATTITUDES TOWARD SUICIDE PREVENTION IN THE
EMERGENCY DEPARTMENT: THE IMPLEMENTATION OF AN ADOLESCENT
SUICIDE RISK SCREENING TOOL.**

by

JULIE A. SIMPSON

EVIDENCE-BASED PRACTICE PROJECT REPORT

Submitted to the College of Nursing and Health Professions

of Valparaiso University,

Valparaiso, Indiana

in partial fulfillment of the requirements

For the degree of

DOCTOR OF NURSING PRACTICE

Student

Julie A. Simpson 4/21/17

Date

Advisor

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Date



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DEDICATION

My project is dedicated in memory of Garrett T. Ferguson (1999-2015). Garrett was the best friend of my son, Elijah, beginning in elementary school until his death during his sophomore year of high school at the age of 15. The tragedy of his death indescribably affected each member of my family. My hope is to always remember the moments he lived his life and only address that moment that ended his life to create awareness for the national crisis of adolescent suicide.

ACKNOWLEDGMENTS

I would like to acknowledge Dr. Julie Brandy, my advisor, for her contribution and support throughout this project. She offered encouragement and guidance that kept me focused and on the right track throughout each step. I would like to acknowledge Cathy Wichman RN, my project site facilitator, who enabled the implementation of this project. Thank you for your shared passion for improving adolescent suicide risk awareness and assessment. I would like to acknowledge Mike Hutchins who supplemented my technology deficits by simplifying the EMR data collection process. I would like to acknowledge the ED staff nurses who participated in this project and provided candid comments throughout the change process.

I would like to acknowledge my coworkers who offered support and encouragement over the past few years. And most importantly, I would like to thank my family who accepted the challenges of my graduate school commitment and provided support through each semester.

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ABSTRACT

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The Center for Disease Control ranked suicide as the second leading cause of death for American adolescents (2015). This crisis of adolescent suicide warrants evaluation and improvement of current suicide prevention practices. The Emergency Department (ED) offers 24-hour services and may be the only organized healthcare for utilized by some individuals. Nurses are the front-line provider of care in the ED and this role offers opportunity to identify an adolescent with increased suicide risk. The purpose of this EBP project is to evaluate nursing attitudes toward suicide prevention by implementing the best practice screening tool for adolescent suicide risk assessment. ED nurses' attitudes toward suicide prevention directly impacts the candor of responses from adolescents during the risk assessment. This project evaluated ED nurses' attitudes toward suicide prevention utilizing the Attitudes to Suicide Prevention (ASP) scale which collects information specific to front-line health professionals. A mandatory class emphasized the current crisis of adolescent suicide and the best evidence recommendation for implementation of the Ask Suicide-Screening Questions (ASQ) risk assessment tool. The ASQ was implemented as a practice change to be completed by ED nurses for all adolescents seeking treatment in the ED. Evaluation of ASQ results followed one month of implementation and results were compared to previous practice data. Seven positive risk screens for adolescents seeking treatment for complaints unrelated to psychiatric or suicidal origin were identified with one month of ASQ implementation. This finding would have been unrecognized with prior practice standards. These results were relayed to staff. A post-intervention ASP survey was voluntarily completed by ED nurses to evaluate a change in nursing attitudes. With the implementation of an educational event and the successful implementation of a new screening tool, improved ED nursing attitudes toward suicide prevention were demonstrated. Results indicated a more positive staff attitude towards suicide prevention, but were not statistically significant ($p > .05$). Data demonstrated an increase in the number of adolescents identified with an increased suicide risk. Based on these results, implementing the ASQ demonstrated an improvement in adolescent suicide risk assessment practice and nursing attitudes toward suicide prevention in the ED.

CHAPTER 1

INTRODUCTION

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Evidence-based practice (EBP) is the process of identifying and utilizing current best evidence available to make decisions about patient care (Melnyk & Fineout-Overholt, 2015). EBP projects utilize existing evidence to make conclusions that lead to changes that will improve patient care and outcomes. It is a vital for a Doctor of Nursing Practice (DNP) prepared practitioner to advocate for EBP that persistently questions and evaluates current patient care practices. EBP is important to nursing care because it advances the practice of nursing by keeping up with current research, basing clinical decisions on objective findings, and generating new ideas to benefit the clinical setting (Schmidt & Brown, 2015). The commitment to life-long learning by the DNP prepared practitioner leads to EBP changes implemented that positively improve the quality of patient care.

Background

Adolescent suicide rates continue to increase at alarming rates. Multiple agencies report statistics on suicides and the data across the resources are grossly disturbing. Every 40 seconds someone (unspecified to age, gender, or race) dies by suicide somewhere in the world (World Health Organization [WHO], 2014). In 2014, adolescents and young adults from the United States aged 15 to 24 had a suicide rate of 11.6 per 100,000 (American Foundation for Suicide Prevention [AFSP], 2014). The Center for Disease Control [CDC] (2015) reports that suicide is now ranked the second leading cause of death for American adolescents. This increased change occurs following several years of ranking as the third leading cause of death. Among students in grades 9-12, data collected from the CDC indicated that 17% of students seriously considered attempting suicide within the previous 12 months, 13.6% of students reported they had made a plans about how they would commit suicide, and 8% had attempted suicide within the last 12 months (CDC, 2015). It is estimated that approximately one million adolescents attempt suicide annually (Wintersteen, 2007). These statistics are alarming in a population that should be enjoying life experiences and gaining personal independence and identity rather than facing distressing life challenges.

Statement of the problem

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This rise in statistical ranking is a major concern that has initiated a national priority for adolescent suicide prevention. In 2012, the United States Surgeon General and the National Action Alliance for Suicide Prevention issued the National Strategy for Suicide Prevention which advocates the development and implementation of suicide risk screening measures (US Department of Health and Human Services [HHS], 2012). Heathy People 2020 has targeted a goal of reducing the suicide rate to 10.2 suicides per 100,000 overall population (age adjusted) which is a 10% improvement over the current national baseline (Office of Disease Prevention and Health Promotion [ODPHP], 2011). The American Academy of Pediatrics (AAP) has called for the implementation of rapid easy to administer suicide screening for all pediatric patients visiting health care settings (Dolan & Fein, 2011).

Intentional death of an adolescent results in many years of life lost. Suicide can be prevented if warning signs are recognized and interventions reach the individual in a timely manner. The untimely death of an adolescent leaves remaining family and friends with insurmountable grief and guilt that lasts indefinitely. There are many current suicide prevention strategies including school prevention programs, workplace prevention programs, social media and television campaigns, and primary care evaluations.

The emergency department (ED) provides an additional opportunity to reach youth who are seeking medical or psychiatric care. The ED offers 24-hour availability for unplanned illness or injury not routinely evaluated in a primary care setting due to time constraints and scheduling. This expanded opportunity of nurse patient interaction offers additional ability to identify adolescents with elevated risk for suicide and provide interventions to curtail a future suicide attempt. The Joint Commission (TJC) is a national accreditation organization that evaluates health care organizations and makes recommendations for care that meets superior safety standards for quality care. TJC has issued a Sentinel Event Alert aimed to assist all health care organizations providing both inpatient and outpatient care to better identify and treat all individuals with suicide ideation (The Joint Commission, 2014). TJC National Patient Safety Goal 15.01.01 addresses one element of performance which requires that organizations conduct a risk assessment that identifies specific patient characteristics and environmental

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features that may increase or decrease the risk for suicide (TJC, 2014). The goal challenges clinicians in emergency service settings to have a crucial role in detecting suicide ideation in all individuals assuring the implementation of appropriate evaluation (TJC, 2014). The suggested action plan for the ED nurses in this alert includes detecting increased suicide ideation through screening, risk assessment, safety, treatment, discharge, and follow-up care of at-risk individuals.

The availability of quality tools and practice guidelines to improve suicide risk assessment in the ED are limited (Petrik, Gutierrez, Berlin, & Saunders, 2015). This creates challenges to nurses who seek methods of improving patient care. Given this challenge, it can be easier to avoid performing a suicide risk assessment rather than embracing this opportunity to identify adolescents with increased suicide risk and improving overall suicide prevention in the ED. Additionally, the nurses' attitudes toward suicide prevention has implications toward successful risk assessment. Health professional attitudes toward suicide prevention are likely to determine the enthusiasm shown in providing care for adolescents with increased suicide risk, which directly affects the success of treatment (Hawton et al., 1981). An important influence on how risk is successfully assessed and managed are the attitudes of the nurses toward suicide prevention (Herron et al., 2001). In order to remove the barriers to identifying increased suicide risk in the ED, identifying the reasons for not addressing suicide risk must be addressed. By not addressing suicide risk in the ED, missed opportunities for intervention exist that may result in a death that could have been prevented.

Data from the Literature Supporting Need for the Project

Various risk factors for suicide have been identified, but may be unrecognized in many adolescents (Horowitz, Ballard, & Pao, 2009). The social stigma for adolescents and their families related to suicidal ideation and mental health issues leads to avoidance of this serious issue. Approximately 90% of adolescents who die by suicide have been diagnosed with at least one mental health disorder including depression, bipolar disorder and/or substance use (Wintersteen, 2007). A history of previous suicide attempt is the strongest predictor of increased suicide potential (Wintersteen, 2007). Additional risk factors include a family history of suicide,

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impulsive behavior, stressful life events, history of physical or sexual abuse, alternative sexual lifestyle, and impaired parent-child relationship (Wintersteen, 2007). Another factor, suicide contagion, is the idea that a recent suicide can stimulate a copycat reaction among youth and can be considered as a risk factor within the area of recent known suicide death. Despite these known risk factors, many high risk adolescents do not obtain necessary mental health treatment (Horowitz et al., 2010).

The emergency department provides a unique opportunity to interact with youth seeking treatment for a variety of complaints both medical and psychiatric in origin. Fifteen to 19-year-old adolescents are the most common age group to present to the emergency department for evaluation of an attempted suicide (Doshi et al., 2005). Research has shown that approximately 40% of persons that die by suicide did seek medical care for reasons other than suicide ideation within the year prior to death (Gairen, House, & Owen, 2003). An estimated 1,500,000 million youth utilize the ED as their only source of healthcare (Wintersteen, 2007). This population of youth includes those without health insurance or from low income families, which places them at additional increased risk (Wintersteen, 2007). Without established primary care, the ED offers these youths their only opportunity for routine health concern screenings. If an increased risk is identified interventions can be immediately implemented including a psychiatric evaluation, safety observation, means restriction education, or follow-up resources provided.

Emergency department clinicians including technicians, nurses, and physicians often cite the lack of mental health skills and lack of preparation as reasons to avoid suicide risk screening. Emergency department staff are skilled and prepared for emergency medical and traumatic situations and focus highly on clinical skills. Due to time and financial constraints, there may be limited resources for mental health training in an area that is expressly focused on medical issues including cardiac, respiratory, or trauma emergencies. This is one reason that the presence of suicide risk goes undetected because clinicians do not recognize the signs and/or do not perform evaluations to assess the risk (Varghese & Gray, 2011).

Data from the Clinical Agency Supporting Need for the Project

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Within the state of Indiana, the CDC's Youth Risk Behavior Survey (2011) revealed that the percentage of Indiana students actually attempting suicide was the 2nd highest among the 43 states surveyed. Indiana suicide death rate ranks 26th nationwide with a death rate of 14.25 out of 100,000 (AFSP, 2014). In the Midwest, overall statistics for 2014 include 442 adolescent (age 15-19) deaths by suicide (CDC, 2014).

In southern Indiana there is a general medical and surgical hospital with 93 beds. This acute care hospital has the capability to treat serious injury or illness. An acute care hospital is usually designed for short-term interventions, and may involve an emergency room visit or a surgical visit that is aimed at stabilizing the patient before they are moved to a more long-term or higher acuity facility if needed. This acute care hospital has a very high rate of patient satisfaction (hospitals.healthgrove.com, 2016). Of the patients who responded to surveys, 76% indicated that they would definitely recommend this hospital to others (hospitals.healthgrove.com, 2016). This acute care facility is among only seven percent of hospitals nationwide that have achieved Magnet status from the American Nurses Credentialing Center. The ED providers include experienced, board-certified physicians, nurse practitioners, physician assistants, nurses, medical technicians, and other healthcare professionals who are ready to treat all types of medical emergencies. The ED cares for more than 30,000 patients each year. This facility is located in a Midwestern town, in southern Indiana with a population of approximately 60,000. In 2015, the ED evaluated 32,530 patients which included 2436 adolescents (Schneck Medical Center [SMC], 2015). The age breakdown for these adolescents included 310 thirteen year olds, 310 fourteen year olds, 283 fifteen year olds, 292 sixteen year olds, 392 seventeen year olds, 431 eighteen year olds, and 427 nineteen year olds (SMC, 2015). A suicide risk assessment is currently completed on all adolescents as part of the patient medical history assessment. A single question inquires if there has been a previous suicide attempt. There is no additional consent obtained for this screening of adolescents. A previous suicide attempt is the strongest predictor of a completed suicide (Wintersteen, 2007). The answer to this question is documented with a "yes" or "no" checkbox. An area for addendum is available to comment with event information including date and method of attempt.

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There is currently no specific policy or procedure in place for follow-up of a “yes” answer to the assessment. The information is recorded and can be recalled during subsequent visits eliminating additional required opportunity to ask about current suicidal thoughts following an initial patient history completion. Currently risk assessment is completed during a health history assessment of all emergency department patients. The single question inquiring if there is a history of suicide attempt must be completed by the nurses.

Improved patient outcomes include increased frequency of identification of adolescents with increased suicidal risk, availability of immediate intervention for those identified as high risk, and increased referral pattern for those identified as increased risk. These improved outcomes will not only meet the mandated guidelines issued by TJC, but will impact overall adolescent suicide prevention. Additional support from the organization was received following discussion of the project topic and the projected outcomes. Support for an EBP project is increased when the organization or department recognizes the need for change.

Multiple screening tools exist for evaluation of suicide risk. In the emergency department, time constraints exist for processing patients. A lengthy multiple question risk assessment would likely be ignored by emergency department staff who are focused on physical assessment and intervention. Target time goals for patient processing are in place to meet standards of care. Therefore, a brief risk assessment is more likely to be implemented leading to increased compliance with patient care recommendations to improve patient care.

Purpose of the Evidence-Based Practice Project

Health-care services need to incorporate suicide prevention as a core component of care (WHO, 2014). Early identification and effective management of suicide risk are key to ensuring that people receive the care they need (WHO, 2014). Early identification can lead to identification of mental health issues that increase the risk of suicide and the implementation of interventions aimed to prevent poor outcomes (Wintersteen, 2007).

Compelling Clinical Question

The clinical question motivating this EBP project and evaluation of current literature included seeking the best way to improve adolescent suicide risk identification in the ED. The

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purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide risk assessment following implementation of a new suicide risk tool for adolescents in the emergency department. An important influence on how risk is successfully assessed and managed are the attitudes of the nurses toward suicide prevention (Herron et al., 2001). A positive attitude toward suicide prevention impacts successful suicide risk assessment leading to improved suicide prevention. Addressing this clinical question and project purpose will improve current standards of practice that meet TJC requirements of addressing suicidal risk in all patients (TJC, 2014). This change in practice will improve suicide prevention strategies for the healthcare organization and the local community.

PICOT Question

The PICOT question is often used in EBP as a formula to guide the process of evaluating the evidence. The PICOT question that was utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)?

Significance of the EBP Project

The crisis of adolescent suicide continues to worsen as the death rates continue to rise. Suicide prevention strategies must be evaluated and options for improvements identified. The ED offers an opportunity to reach adolescents who have no other source of organized health care. This project seeks to identify an increased suicide risk in adolescents presenting to the ED. This EBP project includes clinical implications for the emergency department and will impact overall adolescent suicide prevention.

CHAPTER 2

THEORETICAL FRAMEWORK, EBP MODEL, AND REVIEW OF LITERATURE

Evidence-based practice can be simply defined as the use of current best evidence in making decisions about patient care (Melynk & Fineout-Overholt, 2015). EBP is principled on the utilization of research findings that lead to the production of interventions that improve patient outcomes, decrease resource utilization, and increase patient satisfaction (Schmidt & Brown, 2015). EBP is important to nursing care because it advances the practice of nursing by keeping up with current research, basing clinical decisions on objective findings, and generating new ideas to benefit the clinical setting (Schmidt & Brown, 2015). EBP includes the characteristics of 1) including patient preferences and concerns, 2) including values of patients and providers, 3) incorporating clinician expertise, 4) incorporating clinical reasoning, 5) including a method of evaluation, and 6) overall including a context of caring (Melynk & Fineout-Overholt, 2015).

The purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide risk assessment following implementation of a new suicide risk tool for adolescents in the emergency department. Research of the literature reviewed include those characteristic of EBP that address patient and provider preferences and values, clinical expertise and reasoning, a

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method of evaluation, and an overall context of caring. The clinical question motivating this EBP project and evaluation of current literature included seeking the best way to improve adolescent suicide risk identification in the ED. The PICOT question to be utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)?

Theoretical Framework

A theoretical framework is utilized to provide a structure and frame of reference for the project. This chapter begins by defining the framework to be utilized in this project. Peplau's Theory of Interpersonal Relations is a middle-range theory that was developed in 1952. In this theory, Peplau emphasized that the scope of nursing is based on an interpersonal process that involves the interaction between the nurse and the patient (Peplau, 1952). Peplau stated that the nurse-patient relationship is the most basic human connection and is essential in providing nursing care. "The way in which the nurse produces the effects of her teaching or of the application of a technical procedure has a good deal to do with the interaction between nurse and patient (Peplau, 1952, p. 274)." The goal of Peplau's theory is to assist patients to become aware of and to solve their problems that interfere with constructive living (Peplau, 1952).

Overview of Theoretical Framework

Philosophical claims about human beings and behavior include that the meaning of the behavior of the patient to the patient is the basis on which nurses can determine the needs to be met (Peplau, 1952). Philosophical claims about nurses and nursing include that the nursing process is educative and therapeutic when nurse and patient can come to know and to respect each other, as persons who are alike and different, and as persons who share in the solution of problems (Peplau, 1952). Philosophical claims about interpersonal relationships include that interpersonal relationships are person-to-person interactions that have structure and content and also are situation dependent. With every contact with another human being there is the

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possibility for the nurse of working toward common understandings and goals (Peplau, 1952).

Philosophical claims about the nurse-patient relationship include that the nurse-patient relationship is the primary human contact that is central to providing nursing care. The nurse needs information about the patient's difficulties for the purpose of providing expert nursing care. Collecting information from the patient about the immediate situation is a major source which the nurse uses. The interaction of nurse and patient is beneficial when a method of communication that uses common meanings is at work in the situation. To encourage the patient to participate in identifying and assessing his problem is to engage him as an active partner. The nurse-patient relationship requires patient participation (Peplau, 1952).

The phases of the interpersonal relations between the nurse and the patient represent a relatively concrete and specific classification in this theory (Peplau, 1952). The first phase is the orientation phase. This begins when the patient seeks assistance for a problem. In this phase the nurse first identifies herself by name and professional status and states the purpose and nature of the interaction. The nurse conveys interest to the patient, begins to know the patient as a person, obtains essential information about the patient's health condition, and sets the tone for further interactions (Peplau, 1952). The second phase is the working phase. This phase includes learning current health care conditions. In this phase, the roles of the nurse include interviewer, teacher, counselor, and health care provider. Specific roles mentioned with this theory include stranger, resource person, teacher, leader, surrogate, counselor, and technical expert (Peplau, 1952). The working phase includes the identification subphase during which the patient learns how to make use of the nurse-patient relationship. The patient may respond as interdependent with the nurse or dependent upon the nurse. The exploitation subphase during which the patient makes full use of available professional services (Peplau, 1952). The nurse responds as a resource person to assist the patient to adapt to the health situation. The third phase is the termination phase. In this final phase, the work accomplished is summarized and closure occurs. Discharge planning is implemented. Resources are provided. Each phase includes an overlapping of roles or functions in relation to health problems as nurse and patient learn to work together to resolve difficulties (Peplau, 1952).

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Application of Theoretical Framework to EBP Project

This theory is applicable as a framework for improving adolescent suicide risk assessment in the emergency department (ED). In this theory, the purpose of nursing is to help others in identifying their difficulties, namely increased suicide risk. The interpersonal processes included in this theory includes phases of the nurse-patient interaction. In the orientation phase, an adolescent seeks medical or psychiatric care in the emergency department. Introductions are made by the triage nurse as the adolescent enters the front emergency department entrance or by the assigned nurse who meets the adolescent on arrival directly into the department through the ambulance entrance. As the admission process begins, the identification of increased suicide risk is initiated. A positive attitude toward suicide risk assessment is vital during this step in order to facilitate obtaining candid results. The nurse offers a safe environment for the adolescent to be transparent and honest regarding the assessment screening. In the ED setting, the implementation of suicide risk assessment is included in the working phase. The questions are asked and responses are documented. A positive suicide risk assessment can lead to additional treatment and resources based on individual needs identified in this phase. Those identified as having an increased risk will receive additional assistance through the working phase of the relationship in which the roles of the nurse include notifying the provider of increased risk findings, implementing safety measures as needed, communicating plans of action throughout the evaluation, or answering questions between patient and provider. During the termination phase, the nurse implements discharge planning and follow-up instructions. Through this interpersonal process, both the nurse and patient achieve a goal aimed at improving suicide risk assessment and health outcomes.

Strengths and Limitations of Theoretical Framework for EBP Project

The strengths of this framework include the emphasis on a partnership between the nurse and patient that leads to improved health outcomes. This theory is generalizable to multiple nurse-patient relationships throughout any health care setting. It is applicable in the ED setting as therapeutic trust must be rapidly developed and advancement through the phases of identification, working, and resolution/termination occur rapidly. The emphasis begins with the

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introduction phase as often that first triage response from the nurse sets the stage for the entire visit. It is vital for the nurse to display care, concern and listening through verbal and non-verbal communication that will open doors for honest communication during the assessment to obtain responses to identify any areas of increased suicide risk.

Limitations of this theory include that prevention issues and maintenance issues are not addressed. With a negative suicide risk assessment, the problem of adolescent suicide may not be addressed. Due to the increasing number of adolescent suicide deaths, prevention remains vital to adolescent care. Additionally, this theory may not be applicable for withdrawn and unconscious patients. In the ED, a suicide risk assessment may be deferred due to implementation of life saving interventions. A withdrawn patient may refuse to complete an assessment or refuse to provide honest answers. These limitations should be considered as suicide prevention and clinical care is administered in the ED.

Evidence-based Practice Model

The EBP model is selected to guide the project as it is developed and implemented into practice. The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care was chosen for this project (Buckwalter et al., 2015). The original Iowa Model was developed in 1994 (Titler et al., 2001). Revisions have been made since its inception to improve its application with the dynamic nursing field. This current revised model is based on problem solving steps and is widely recognized for its applicability to patient care and its ease of use for healthcare teams (Melynk & Fineout-Overholt, 2006). This model has been used in multiple practice settings since its inception. The results of application of the model have led to improvements in patient care, patient outcomes, patient satisfaction, and cost savings for health care organizations (Titler et al., 2001). The Iowa Model has proven to support the infusion of evidence into practice. Following results of multiple evaluations, the model has been updated to reflect relevancy with current healthcare trends. The current version is the Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care (Buckwalter et al., 2015).

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Overview of EBP Model

The first step of the Iowa Model Revised begins with identifying a triggering issue or opportunity (Buckwalter et al., 2015). These issues lead staff to question and evaluate current nursing practices. Examples of issues faced by health care organizations include clinical practice issues, risk management issues, initiatives directed by the organization, state, or national level, or requirements by accrediting organizations, or a philosophy of care (Buckwalter et al., 2015). Adolescent suicide is a problem-focused trigger. It has been identified as a National Patient Safety standard by The Joint Commission (TJC). This accrediting organization mandates evaluation of suicide risk to improve patient safety (TJC, 2015). Additionally, data has indicated a rise in the number of adolescent suicide deaths raising it to the second leading cause of death in adolescents (CDC, 2015).

The second step is to state the question or purpose (Buckwalter et al., 2015). The purpose of this evidence based project is to evaluate ED nurses' attitudes toward suicide risk assessment following the implementation of a new suicide risk tool for adolescents in the ED. A well designed clinical question will yield the most relevant and best evidence (Melynk & Fineout-Overholt, 2015). Clinical questions are asked in a PICOT format. A PICOT question can be utilized to identify the key components of the problem and the project. This format includes identifying the (P) population of interest, the (I) intervention or issue of interest, the (C) comparison, the (O) desired outcome, and the (T) time involved (Melynk & Fineout-Overholt, 2015). The PICOT question to be utilized for this project was for ED nurses (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED over (O) a one-month period?

The third step in the model is to determine if the topic is a priority (Buckwalter et al., 2015). If the topic is not a priority, a feedback loop exists in the model to consider another issue or opportunity. Discussion with the Director of Emergency Services to choose a project topic included the need for evaluation and improvement of the current practice of suicide risk assessment. The rise in numbers of completed adolescent suicides nationally has led to change

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in suicide listed as the second leading cause of death for adolescents (CDC, 2015). Within the local community, the occurrence of several adolescent deaths by suicide has created an increased awareness of the problem. TJC issued a Sentinel Event alert urging a safety recommendation to evaluate all patients for suicide risk (TJC, 2010). To meet this performance measure and address the data changes, an evaluation of current practice is a priority for the organization. The highly alarming statistic of adolescent suicide rates (CDC, 2014) supports the need for this organization to evaluate current risk assessment procedures. As an organization that supports the local community and interacts with multiple surrounding communities, there is a need to evaluate and improve practice that reflects a response to increased incidents in the local area. An untimely death by suicide of an adolescent affects an entire community and is often a widely publicized event. The local health care organization can demonstrate support within the community by evaluating current suicide assessment processes and implementing improved processes aimed at increasing suicide awareness and prevention for adolescents. Support for the EBP project is increased when the organization recognizes the priority of the issue.

Once the topic was determined to be an organizational priority, the fourth step in the model is the development of a team (Buckwalter et al., 2015). For this EBP project, the team consisted of a project manager doctoral nursing practice student, a project facilitator emergency department director, a project mentor DNP professor, and emergency department registered nurses who will implement the tool. These staff members received education on the project and instructions to utilize the tool during the implementation phase of the project.

The fifth step in the model was to assemble, appraise, and synthesize the body of evidence (Buckwalter et al., 2015). A systematic search for identifying suicide risk of adolescents in the emergency department resulted in a complete review of literature including studies and guidelines with level of evidence ratings evaluated and identified. Research studies and evidence based guidelines should be included as the literature is reviewed (Titler et al., 2001). Multiple data bases should be included in the search to obtain the most current and relevant evidence available. The results of the review of literature should be evaluated for

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quality, quantity, consistency and risk (Buckwalter et al., 2015). Additionally, the review of literature should reflect the need for change with the evidence supporting implementation of successful interventions. The applicable articles should be critiqued for quality.

As sufficient evidence was identified by the project manager, the synthesis of the information is obtained. The synthesis of evidence should evaluate if there is sufficient evidence to initiate a change. This is the sixth step in the Iowa Model Revised (Buckwalter et al., 2015). If there is not sufficient evidence, a feedback loop exists in the model to conduct further research.

The seventh step in the Iowa Model Revised includes designing a practice change (Buckwalter et al., 2015). Synthesis includes identifying research evidence that supports a change in clinical practice. As the pilot to practice change is designed the Iowa Model Revised identifies steps in the process: 1) engaging patient preferences, 2) considering resources, constraints and approval, 3) developing a localized protocol, 4) creating an evaluation plan, 5) collecting baseline data, 6) developing an implementation plan, 7) preparing clinicians and materials, 8) promoting adoption, and 9) collecting and reporting post-pilot data (Buckwalter et al., 2015). The conclusions that are identified through this projects review of literature support the implementation of a brief suicide screening tool for adolescents in the emergency department to improve increased suicide risk identification.

The eighth step includes determining if the change is appropriate for adoption into practice (Buckwalter et al., 2015). If it is not determined to be an appropriate change, a feedback loop exists in the model to consider alternatives and redesign the project. The goal of this EBP project is to improve identification of adolescents with increased suicide risk and with this process improvement change, nursing attitudes toward suicide prevention will improve leading to permanent practice improvement.

The ninth step involves the integration of the practice change into a sustained practice (Buckwalter et al., 2015). Steps for sustaining a practice change include identifying and engaging key personnel, implementing a hardware change into the system, monitoring key indicators, and reinfusing the change as needed (Buckwalter et al., 2015). An outcome goal for

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this project was that this tool will be utilized long term in the emergency department to meet the Joint Commission guidelines and to improve suicide prevention in the emergency department.

The tenth step includes the dissemination of the results (Buckwalter et al., 2015). The dissemination of the results with others is vital to globally improving patient care. Results should not only be shared with those involved in the process, but to other practice providers who would benefit from adopting the change.

Strengths and limitations of the model

The strengths of the Iowa Model include the structured steps in the process to ensure the inclusion of best evidence into practice. These structured steps lead to better understanding of the process for the clinician seeking to improve quality. The revised version of the model incorporates feedback loops and action steps that reflect needed adjustments throughout the process. This encourages changes to be made throughout the process without a necessity to start over.

Limitations of the model may include inability to incorporate best practice into a health care system that does not offer adequate support. This becomes a challenge for staff who recognize the need for change, but cannot initiate improvements in the system due to organizational barriers. Another limitation includes that the model does not address financial issues included in the change process including additional training hours, staff hours, and dissemination costs that may be a barrier in the successful implementation of a new practice.

Project Focus

The clinical question that motivated the development of this EBP project focused on seeking if nursing attitudes affect adolescent suicide risk identification in the ED. The review of literature included seeking the best way to improve adolescent suicide risk identification in the ED. The purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide risk assessment following education and implementation of a new suicide risk tool for adolescents in the emergency department. The evidence will reveal that the implementation of a standard universal screening tool will lead to increased assessment completion rates by nurses that can

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lead to improved identification of adolescents with increased suicide risk in the ED (Boudreaux et al., 2016). Nurses are the front line provider of care in the ED and this role offers a vital opportunity to identify an adolescent with increased suicide risk. The attitude of the nurses as they perform a suicide risk assessment directly affects the validity of the results and overall suicide risk identification and prevention. Health professional attitudes toward suicide prevention are likely to determine the enthusiasm shown in providing care for adolescents with increased suicide risk which directly affects the success of treatment (Hawton et al., 1981). A negative attitude can be interpreted through non-verbal communication to the adolescent who may then neglect to reveal suicidal thoughts resulting in missed opportunity for suicide intervention. A negative attitude toward suicide prevention can be a barrier to improving risk assessment.

Evaluating ED nurses' attitudes toward suicide prevention is an important step in improving the overall process of improving adolescent suicide risk assessment. The Attitudes toward Suicide Prevention (ASP) scale can be utilized to evaluate attitudes of nurses toward suicide prevention. The ASP Scale is effective to assess ED nursing attitudes. This scale was developed following a study by Herron and colleagues (2001). The purpose of this study was to develop a reliable questionnaire for the assessment of attitudes toward suicide prevention, and to investigate the range of attitudes toward suicide prevention in front-line health professionals. Interviews were conducted with 36 health professionals (10 community psychiatric nurses, 8 emergency nurses, 12 psychiatrists in training, and 6 general practitioners), either in groups or individually. The interviews were semi-structured and consisted of open-ended questions that provoked discussion. The interviews produced identification of 60 attitudes related to suicide prevention. These attitudes were analyzed for repetitions, ambiguities, and statements that were not directly relevant to suicide prevention. This resulted in 32 items being removed. The remaining 28 items were arranged as a series of statements. These statements could be categorized into a final common 6 themes. The ASP scale includes the assessment of the following themes related to nursing staff attitudes 1) the accuracy of suicide risk assessment in clinical practice, 2) the interpretation of expressions of suicidal intent, 3) the responsibility of a clinician in preventing suicide, 4) the practicality of preventing suicide in clinical practice, 5) the

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preventability of suicide in general, and 6) the impact of nonclinical factors on suicide rates (Herron et al., 2001). A factor analysis was performed on the initial 28-item questionnaire. Fifteen items were selected from the analysis with factor loading results of 0.5 or above. In the final version, however, one further item was dropped in order to increase internal reliability. The scoring range in this final 14-item version was 14-70 (Cronbach's = 0.77). A lower score indicates a more positive attitude. Internal consistency was assessed using a factor analysis for the 14-item scale that had a range of 14-70 with a Cronbach's alpha of 0.77. Test-retest reliability was high for the 14 item questionnaire with a correlation coefficient of 0.85 ($p < 0.001$). The questionnaire was named the Attitudes toward Suicide Prevention (ASP or ASTP) scale. Each question in the 14-item ASP elicits a response on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree."

Following the development of the ASP scale, the same investigators performed an additional study (Herron et al, 2001) utilizing this scale. It was dispersed to 218 front-line health professionals who were asked to complete the questionnaire. Completed questionnaires were returned by 168 respondents, a response rate of 77%. These consisted of 35 (74%) psychiatrists in training, 56 (97%) community psychiatric nurses, 35 (70%) general practitioners, and 42 (67%) accident and emergency nurses. Statistical analysis included Kruskal-Wallis ANOVA for nonparametric, ranked data, one-way analysis of variance, a two-tailed t test for independent samples, Pearson's bivariate correlation and analysis of variance. Results revealed the most negative attitudes being reported by general practitioners and emergency nurses, and the most positive attitudes being found among community psychiatric nurses. Significant differences between professional groups were found on nine survey items with differences on two more were of borderline significance ($p < 0.1$). Of these 11 identified items, emergency nurses were most negative on 6 of the survey questions.

Limitations identified in this study include that there was no satisfactory instrument against which to test the validity of the ASP scale even though there is overlap commonalities with a similar attitude evaluation tool, the Suicide Opinion Questionnaire. The ASP scale scores in this study did not reveal either strongly positive or strongly negative attitudes in general. A

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strength includes the identification of specific areas of negative attitudes. A negative attitude finding from this survey is not necessarily incorrect, but if it will influence clinical behavior they may adversely affect the management of some suicidal patients. This provides direction for improvement strategies.

The ASP is able to collect information on the attitudes toward suicide prevention in front-line health professionals. This short questionnaire can reliably assess the attitudes of ED nurses. It can be quickly completed and could be used to identify nurses needs and specific areas for improvement.

A study by Brunero and colleagues (2008) utilized the ATSP (also referred to as the ASP) to examine the attitudes towards suicide prevention among non-mental health professionals. A cross-sectional survey was conducted among a sample of nurses, midwives and allied health professionals working at one hospital campus. The ATSP scale was implemented to each participant. Two hundred and forty ($n = 240$) healthcare professionals were mailed the survey via the internal hospital computer network. One hundred forty-three surveys were returned. Nine of these were not included as they were completed by mental health professionals which was part of the exclusion criteria as the study is aimed toward non-mental health professionals. The total study sample of $n = 134$ and a final response rate of 55.8%.

All data were entered into SPSS version 14.0 for analysis. Mean total ATSP scale score for the sample was 35.2. Scoring range is 14-70. A lower score indicates a more positive attitude toward suicide prevention whereas a higher score indicates a more negative attitude. The sample of 14 ATSP items ($n = 134$) was subject to internal consistency analysis in order to ascertain reliability. The scale yielded a Cronbach's alpha value of 0.76. This finding is consistent to that obtained by the authors (0.77) of the ATSP in their validation study (Herron et al., 2001). This indicates that internal consistency was present in the scoring. Attitudes were influenced by factors include suicide education training, personal contact with a history of suicide and professional experience. Those who had undergone previous educational training yielded lower (positive attitude) scores (mean 33.0) than those who had not undergone

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educational training (mean 36.2) (one-way analysis of variance: $F = 7.8$; $P = 0.006$). Those who had had a friend or relative attempt suicide ($F = 4.5$; $P = 0.035$) and those who had had a friend or relative commit suicide ($F = 4.0$; $P = 0.048$) were also found to be more likely to yield lower ATSP (positive attitude) total scores. Professional experience of suicide showed no statistically significant relationship to attitudes on the ATSP.

Limitations to this study include additional variables affecting attitudes toward suicide that were not identified. Strengths includes successful findings including measurable change in attitude demonstrating that minimal education is still worthwhile. Conclusions to this study include the need to challenge health professionals' negative attitudes towards suicide. This can include educational opportunities aimed at suicide risk awareness.

Preventing suicide can depend upon the ability of different health professionals to make accurate suicide risk assessments and treatment plans. Nurses are the front line provider of care in the ED and this role provides a vital opportunity to identify an adolescent with increased suicide risk. The attitudes that clinicians hold towards suicide prevention initiatives may influence their suicide risk assessment and management skills. An important influence on how risk is successfully assessed and managed are the attitudes of the nurses toward suicide prevention (Herron et al., 2001). As nurses become active participants in overall successful tool implementation, confidence will increase and attitudes toward ED suicide risk assessment will improve. Utilizing a standard screening tool will enable ED nurses to rapidly identify increased suicidal risk in adolescents while avoiding additional time requirements or mental health experience that may have led ED nurses to avoid completing the screening (Petrik et al., 2015). An improved attitude increases motivation to consistently provide the highest level of clinical care. Improving attitudes about suicide prevention should minimize avoidance by nurses and increase their desire to complete the screening and identify at-risk youth (Herron et al., 2001). In a study by Betz and colleagues (2015), completion rates for risk assessment were shown to increase when a standardized tool was utilized. As the completion rates increased, not only did risk identification rates increase, but also nursing self-reported confidence levels in assessment skills improved (Betz et al., 2015).

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The implementation of a standardized tool is an important step to improved clinical practice that addresses the Joint Commission clinical recommendations for improving patient safety standards to identify those adolescents in the emergency department with an increased risk for suicide (TJC, 2014). The literature search for this project will focus on finding the evidence to support the best suicide risk tool for ED nurses to utilize to identify adolescents with increased suicide risk.

Literature search

Comprehensive literature searches of Medline, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Cochrane Library, Joanna Briggs Institute, Health Source, and National Guidelines Clearinghouse data bases were searched. The key words searched included “suicide risk”, “adolescent”, “emergency service”, “emergency department”, and “emergency room”. Search limiters applied included scholarly (peer reviewed) journals, English language, and date limits of 2000 to current date. The search was reviewed with the university research librarian who provided additional suggestions for key words and data base options to achieve the final best search results. Fifty-four potential article abstracts were reviewed for relevance to the proposed project. Eighteen of these applicable abstracts were further reviewed in full text to locate six applicable evidence articles for this project. Twenty-six clinical guidelines headings were reviewed and five complete guidelines were reviewed leading to two clinical practice guidelines included as evidence. Studies included in this project evaluated aspects of adolescent suicide risk assessment implementation in the emergency department. A citation chase of relevant articles was utilized to find additional fourteen applicable studies, of which three are included in the final evidence selection. Multiple websites for suicide prevention were reviewed. One relevant article was included from a general search of the website of the National Institute of Mental Health (NIHM).

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Sources examined for relevance

Table 2.1

Review of Literature Search Summary

Keywords: "suicide risk" and "emergency department" or "emergency service" or "emergency department" and "adolescent"

Limiters: English language, scholarly reviewed

Database	Found	Duplicate	Reviewed	Analyzed/Selected
Medline	54	0	18	6
CINAHL	14	11	8	0
Cochrane	2	2	2	0
JBI	0	0	0	0
NIMH	12	0	10	1
NGC	26	0	5	2
Health Source	6	2	4	0
Citation Chase	14	0	14	2

Appraisal of Evidence

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Evidence was evaluated for quality utilizing the Johns Hopkins research appraisal tool for qualitative research and non-research (Dearholt & Dang, 2012). High quality articles are included to determine the best practices of assessing suicide risk of adolescents in the emergency department. This tool evaluates evidence for quality and categorizes quality as high quality, good quality, or low quality. Qualitative research and clinical practice guidelines are included in this final literature review related to suicide risk assessment in the emergency department. High quality evidence for quasi-experimental or quality research includes consistent, generalizable results, a sufficient sample size for the study design, adequate control in place, definitive conclusions, and consistent recommendations based on a comprehensive literature review that includes thorough reference to scientific evidence (Dearholt & Dang, 2012). High quality evidence of clinical practice guidelines include that the material is officially sponsored by a professional, public, private organization, or government agency. There must be documentation of a systematic literature search strategy and inclusion of consistent results with sufficient numbers of well-designed studies. Additionally, criteria-based evaluation of overall scientific strength and quality of included studies and definitive conclusions. Lastly, the guideline must have been developed or revised within the last five years (Dearholt & Dang, 2012). The best evidence was collected to support the need for a change from current practice of a single question history of suicide attempt and the need for implementation of an adolescent suicide assessment tool to improve suicide risk assessment. The evaluation of this evidence leads to inclusion of high quality evidence to support adolescent suicide risk assessment.

Levels of Evidence

The level of evidence included is based on the Melnyk Hierarchy of Evidence (Melnyk & Fineout-Overholt, 2011). These seven levels of evidence are based upon the design of the study. Level I includes systematic review & meta-analysis of randomized controlled trials and clinical guidelines based on systematic reviews or meta-analyses. Level II includes one or more randomized controlled trials. Level III includes controlled trial with no randomization. Level IV includes case-control or cohort studies. Level V includes systematic review of descriptive & qualitative studies. Level VI includes single descriptive or qualitative study. Level VII includes

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expert opinion (Melynk & Fineout-Overholt, 2011). Two meta-analysis studies are included in the evidence as clinical practice guidelines and are designated as a Level of evidence I. Level I evidence is at the top of the evidence pyramid and considered that highest level of evidence. Two Level III quasi-experimental studies are included. Eight single descriptive or qualitative studies are included in the evidence and are designated as Level of evidence VI. Although the remaining studies included are ranked at level VI, there is consistency across the findings that lead to strong recommendations.

Table 2.2

Level of Evidence / Quality of Evidence

Level of Evidence	Included in Project	Design of Evidence	Quality of Evidence / Appraisal
I	2	Systematic Review /Meta-analysis	Guideline 10354/High/A Guideline 10061/High/A
II		Randomized Control Trials	
III	2	Non-Experimental/ non-randomized	Betz, 2015/High/A Boudreaux, 2016/High/A
IV		Evidence from case-control or cohort studies	
V		Evidence from systemic review of qualitative study	
VI	8	Evidence from single descriptive	Petrik, 2015/High/A Horowitz, 2010/High/A Ballard, 2013/High/A Horowitz, 2001/High/A Folse, 2006/High/A Folse, 2009/High/A King, 2009/High/A Horowitz, 2012/High/A

Melnyk, B. M. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice* (2nd ed.). Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

Provider Evaluation of Improving Suicide Risk Assessment

To begin the process of finding the best practice for identifying adolescent suicide risk for the ED, a study by Petrik and colleagues (2015) is included in the evidence. This study examined barriers and facilitators to suicide risk assessment in the emergency department (ED). Ninety-two ED providers including physicians (n=9), residents (n=9), physician assistants (n=6), registered nurses (n=64) and social workers (n=4) responded to an online survey containing 3 open-ended questions in this qualitative study. The sample group originated from two facilities including an academic medical center (n=57) and a community hospital (n=35). The mean age of participants from the medical center was 35.9 years with ED experience average of 8.06 years. The mean age of participants from the community hospital was 41.74 years with ED experience average of 12.2 years. Participants were asked to describe (1) the barriers to assessing suicide risk, (2) their preferred assessment method, and (3) the factors that facilitate suicide risk assessment. These questions attempted to seek common factors that facilitate or hinder suicide risk assessment in the ED. An inductive thematic analysis was utilized to analyze the data. Coding themes were determined by the research committee members.

Results included six overall common themes regarding suicide risk assessment. The predominant theme barrier found was time pressure to meet the ED demands while treating multiple high acuity patients simultaneously. A second identified barrier is lack of privacy to obtain a valid assessment with multiple staff and family often present with the patient. A third barrier includes frequent acute medical issues or use of intoxicants by the patient which lead to the inability or unwillingness from the patient. A fourth theme result identified a facilitator for suicide risk assessment including the verbal administration of questions and the utilization of eye contact and a non-judgmental tone improved the response from patients. A fifth theme included a barrier due to the lack of standard protocols and method for risk assessment. A standard protocol or method is believed to facilitate risk assessment. A sixth theme included a

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barrier due to the lack of collaboration with other professionals (i.e. social work, police, crisis team) following risk assessment. These results were considered in recommendations to decrease the burden of identifying suicide risk. Recommendations for improving practice include considering time and privacy, identifying available mental health referrals, and implementing a standard protocol for nurses or providers to obtain the risk assessment. Responding to a positive risk assessment can include providing resource information for low risk results and mental health evaluation for high risk results. A strength of this study includes the consistency of results with other previous study findings (Delgado et al., 2011; Boudreaux & Horowitz, 2014; Randall, Colman & Rowe, 2011). Limitations to this study included a variety of provider roles that responded to the questions (physicians, nurse practitioners, registered nurses and social workers). Another limitation included a potential bias due to self-selection of participants that may possibly include only those who have strong opinions about suicide care in the ED. Conclusions were aimed at improving implementation of suicide risk assessment through removing the barriers that lead to inconsistency and maximizing facilitators that lead to success. This study is included in Level VI evidence as a descriptive qualitative study. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Providers were questioned about practices regarding adolescent suicide risk assessment in the ED in a study by Betz and colleagues (2015). This study examined attitudes and practices of providers related to suicide risk assessment in the ED. The purpose of the quasi-experimental study was to evaluate changes in knowledge, behavior, and attitudes following implementation of universal screening tool for suicide risk in the emergency department. A voluntary survey was conducted at three points of the study including baseline, following implementation of a universal suicide screening tool, and following implementation of suicide protocol including prevention resources and intervention suicide risk screening tool. Each survey was given at three month intervals. A 4 or 5 point Likert scale was used to obtain results. A total of 1,289 providers including ED physicians and registered nurses from eight EDs in different states participated in the study. Characteristics of the sample included 1) over

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half of the participants were female (n=821), 2) the median age of participants was 40 years old, 3) most of the participants were nurses (n=872), and 4) most of the participants were white (n=1,197). The results were analyzed using Pearson chi square and Fisher exact test as indicated. All p values were two-tailed, with $p < .05$ considered statistically significant.

Results included the greatest change in outcomes following the implementation of a universal screening tool and protocol. Nurses screening patients for suicidal risk reported 36% completion at baseline phase one, 93% completion following implementation of a screening tool phase 2, and 95% following implementation of a protocol with screening tool and resources phase 3 ($p < .001$ for comparisons between phase 1, 2, and 3 respectively). Physicians screening for suicide risk reported 8% completion at baseline, 20% following implementation of a universal screening tool, and 36% following implementation of a universal screening tool and protocol ($p < .01$ for comparisons between phase 1, 2, and 3 respectively). The greatest changes in outcomes described include the nurses who reported screening most or all patients for suicide risk following the implementation of a universal screening tool. These findings supported implementing a universal screening tool improve identification of adolescents with increased suicide risk in the ED. Additional findings include continued reports from providers that screening leads to increased ED time requirements and that only 43% of participants believe that suicide is preventable ($p < .52$). Limitations include findings may include self-report bias due to length of time between survey assessments. The conclusions support that implementing a universal screening tool will increase identification of patients in the ED with increased suicidal risk. This study is categorized as Level III evidence as a quasi-experimental design. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Adolescent Evaluation of Suicide Risk Assessment

Adolescents were directly evaluated for their opinions regarding questions about suicide risk assessment in a study by Ballard and colleagues (2013). This study examined adolescent opinions on screening for suicide risk in the ED. This qualitative study included a convenience sample of 165 youth ages 10 to 21 who presented to the ED for psychiatric and non-psychiatric

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complaints. Demographics of the 165 included 95 females and 70 males with 129 participants within the age range of 12-17. Race majority was white (n=119). Presenting complaint was mostly non-psychiatric (n=119). Each participant was screened in privacy by an ED nurse, while awaiting physician evaluation with the Ask Suicide-Screening Questions (ASQ). Following this brief suicide risk screening, each adolescent was asked “do you think ER nurses should ask kids about suicide and thoughts about hurting themselves...why or why not?” Qualitative analysis included NVivo9.2 software used to evaluate the data of the answered questions. Open coding procedures were used to identify themes from the data.

Results included findings that 90% (148/165) of adolescents agreed that nurses should ask kids about suicide. Themes supporting implementation of suicide risk screening in the ED included identification of youth at risk who would not otherwise have disclosed thoughts or feelings, additional source of suicide prevention, development of therapeutic relationship between nurse and patient, opportunity for obtaining mental health resources, and providing an objective resource that youth who are otherwise isolated may turn to. The few participants (n=17) who did not support ED evaluation of suicide risk cited reasons of staff being distracted from the chief complaint and that asking about suicide risk may lead to suicidal thoughts. The strength of this study includes increased validity and generalizability due to the similar results found in a previous study with a different setting and demographics (O’Mara et al., 2012). Limitations include potential lack of generalizability due to the urban setting and assessment of only one single open-ended question. Conclusions include support for suicide risk assessment efforts in the ED to improve identification of adolescents with increased risk for suicide. The potential risk that adolescents will not disclose suicidal thought unless directly asked is alleviated by suicidal risk assessment in the ED. Recommendations include the need to ask adolescents directly about suicide intentions and an ED assessment provides this opportunity. This qualitative study qualifies as Level VI evidence. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Implementation of Suicide Risk Assessment

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Additional factors related to improving identification of adolescent suicide risk were evaluated in an instrument validation study by Horowitz and colleagues (2010). This study examined the feasibility of performing a suicide risk assessment of adolescents in the emergency department. Four concepts were assessed to determine feasibility. Acceptability was evaluated by ascertaining if parents of adolescents with non-psychiatric chief complaints would allow their children to be screened for suicide risk. Prevalence was evaluated by ascertaining if suicidal ideation and behaviors are common with non-psychiatric patients presenting to the ED. Practicality was evaluated by ascertaining if non-psychiatric patients who screen positive for suicide risk can be managed effectively without interrupting the flow of the emergency department. Patient opinion was included for feasibility and evaluated as inquiring if adolescent patients support suicide screening in the ED. A convenience sample of 156 youth aged 10-21 were included in this cross-sectional study. Participants in the study were evaluated for suicide risk utilizing the 17-item Risk of Suicide Questionnaire (RSQ) and the 30 item Suicidal Ideation Questionnaire (SIQ) for those age over fifteen and a 15-item SIQ for those age under fifteen. Acceptability included an evaluation of reasons for declining participation in the study. Those patients that were eligible for the study but declined (n=97) cited reasons of pain and fatigue, objections to parents leaving the room, objections to the nature of the questions, acute distress, and parent concerns for young age and questions.

Prevalence was found as 27 of the 106 patients (25%) who presented with non-psychiatric complaints were considered to have a positive suicidal risk assessment following implementation of the tools. Prevalence for a positive suicide risk screen was higher in the 50 participants presenting with psychiatric complaints resulting in 20 participants (40%) that screened positive for increased risk. Practicality resulted no additional documented length of stay time resulting from tool implementation questioning process and follow-up process with those who screened positive verses those who screened negative. Patient opinion revealed a neutral response from the majority of adolescents, but 18% (28) of the 156 patients screened implied support of the screening including ability to "tell the truth" of personal feelings. Overall findings include that asking pediatric patients directly about suicidal thoughts and behaviors is

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valuable and should be included in the emergency department setting. Limitations of the study include the inability to generalize results between psychiatric and non-psychiatric complaints due to the sample size. Another limitation is the study was conducted at a single site.

Conclusions support the feasibility of directly asking adolescents about suicidal risk in emergency department. The results further recommended utilization of a brief screening tool in the emergency department setting to improve identification of adolescents with increased suicide risk. This qualitative study qualifies as Level VI evidence. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Specific Suicide Risk Screening Tools

Specific suicide risk screening tools have been developed to assist in identifying suicide risk in the ED setting. Horowitz and colleagues (2001) utilized a cross-sectional survey to develop a screening tool applicable for the ED staff to rapidly and accurately evaluate suicidal risk in children and adolescents. A 14-item Risk of Suicide Questionnaire (RSQ) and a 30 question Suicide Ideation Questionnaire (SIQ) were administered to pediatric and adolescent patient seeking mental health treatment in an emergency department. A total of 144 children and adolescents were screened as part of this study. These participants were being evaluated in an urban teaching hospital pediatric ED. Of the 144 participants 66 were male and 78 were female. The mean age was 13.6 years. Race demographics included 70 white, 38 black, and 22 Hispanic. Each participant completed the 14-item RSQ administered by the ED triage nurse. A follow-up 30-item Suicidal Ideation Questionnaire (SIQ) was completed by a member of the psychology team. The SIQ served at the criterion standard to validate the RSQ. Analysis of the results were evaluated using the logistic procedure of SAS Version 6.12. To find the optimal combination of RSQ items for inclusion in a brief screen, sensitivity, specificity, positive and negative predictive value, and c statistics were calculated. A positive response to any one of the questions of the RSQ concluded to a positive screen for suicide. Frequencies of positive responses to each screening tool were compared. Prevalence of increased suicide risk screen for this study population was 0.44.

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Conclusions from this study indicated that there are four consistent items that positively reflect an increased risk for suicide. The four items included current suicidal behavior, past suicidal ideation, past self-destructive behavior, and current life stressors. These four items had a predictive c statistic of 0.87, a sensitivity of 0.98, and a NPV of 0.97. The results of the 4-item RSQ screen remained similar the results of the 14-item RSQ which had a predictive c statistic of 0.90. These results indicated that a brief 4-item screening tool has good validity to assess suicide risk in comparison to a longer, more detailed 14-item questionnaire. Responses to these 4 items administered by the triage nurse identified 98% of children with increased risk for suicide as assessed in comparison to the longer standard criterion SIQ. The 4-item RSQ includes four questions: 1) is the reason for the visit is due to a self-harm attempt, 2) have there been thoughts of killing oneself over the last week, 3) has there been a past attempt of self-harm or suicide, and 4) has there been a stressful life event in the recent weeks. Non-mental health clinicians can utilize this four question tool to accurately identify those adolescents at increased risk for suicide. Strengths of this study include clinical implications that non-mental health clinicians can accurately administer the tool. This improves opportunity for early identification of increased suicide risk which can lead to immediate intervention available in the ED. Limitations of this study include the inclusion of only adolescents seeking mental health treatment. Additional studies evaluated adolescents seeking medical/surgical treatment is needed to increase validity of the screening tool. Recommendations support the use of the 4-item RSQ for adolescents and children as an accurate brief suicide risk screening tool in the ED. This study qualifies as Level IV evidence. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Table 2.3

Risk of Suicide Questionnaire (RSQ)

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- 1) Are you here because you tried to hurt yourself?
- 2) In the past week, have you been having thoughts about killing yourself?
- 3) Have you ever tried to hurt yourself in the past (other than this time)?
- 4) Has something very stressful happened to you in the past few weeks (a situation that was very hard to handle)?

(Horowitz et al., (2001). Children's Hospital Boston, Massachusetts)

Folse and colleagues (2006) performed a pilot study to evaluate the 4-item Risk of Suicide Questionnaire (RSQ) in adolescents and adults seeking treatment in an ED setting. This study expanded on the result of a previous study (Horowitz et al., 2001) which identified the RSQ as a valid instrument to effectively screen adolescents seeking mental health treatment for suicide risk. This study included a convenience sample of 104 participants including adolescents (n= 39) and adults (n=65) with various chief complaints seeking treatment in the ED. Adolescent demographics included a mean age of 18, 71.8% females and 28.2% males, and 69.3% Caucasian and 28.2% African American. Adult demographics included a mean age of 45.9, 58.5% females and 41.5% males, 80% Caucasian and 18.5% African American. The 4-item RSQ screen elicited responses for 1) current self-harm behaviors, 2) recent thoughts of suicidal ideation, 3) past history of self-harm or suicide attempt, and 4) current life stressors. This study was aimed to assess adolescents and adults presenting with complaints other than mental health issues. The sample consisted of 89.4% of participants with non-psychiatric complaints.

Analysis of results utilized Pearson's correlation to establish validity. For adults a strong correlation ($p < 0.01$) existed for questions 1 with chief complaint ($r = 0.36$), primary diagnosis ($r = 0.49$), and suicide diagnosis ($r = 0.70$). Additionally, for adults, strong correlation existed for question 2 ($p < 0.01$) with chief complaint ($r = 0.33$), primary diagnosis ($r = 0.33$), and suicide diagnosis ($r = 0.49$). For adolescents a strong correlation ($p < 0.01$) existed between question 1 of current self-harm and chief complaint ($r = 0.87$), primary diagnosis ($r = 0.87$), and suicide

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diagnosis ($r = 0.75$). There was also a strong correlation with question 2 of recent thoughts of suicide and chief complaint ($r = 0.86$), primary diagnosis ($r = 0.86$), and suicide diagnosis ($r = 0.72$). Validity was not significant for questions 3 of previous suicide attempt and question 4 of current life stressors. Cronbach's alpha coefficients were calculated to determine reliability. Moderate reliability was shown in the adolescent population ($\alpha = 0.63$) for all 4 items. Strong reliability was shown for adults ($\alpha = 0.80$) when only question 1 and question 2 were calculated. Moderate reliability was shown for adolescents ($\alpha = 0.65$) when only question 1 and question 2 were calculated. Overall, 30% of individuals regardless of chief complaint in this study screened positive for increased suicide risk. Limitations for this tool include potential for a positive screen resulting from additional mental health issues other than suicidality indicating a false positive screen. Strengths of the study include an additional evaluation that 100% of the adolescents who completed the RSQ reported that asking everyone seeking treatment in the ED about suicide risk is useful. Study results reflected the results of the previous study evaluating the RSQ (Horowitz et al., 2001). Limitations of this study include inability to reach internal consistency for subgroups. The sample size did not adequately represent a multi-cultural population which could limit generalizability. Further recommendations include additional testing of the RSQ within the adolescent population of those with non-mental health complaints with a larger culturally diverse population.

Results of this study continue to support the use of a two question RSQ could be utilized to predict increased suicide risk in adults and adolescents. Recommendations from this study suggested that screening all adolescents regardless of presenting symptoms with the 4-item RSQ will improve identification of increased risk for suicide. The conclusion and recommendations include support of the utilization of the RSQ by ED staff for adolescents in the ED to improve identification of increased suicide risk. This study qualifies as Level VI evidence. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Folse and Hahn (2009) performed a study that continued testing of the 4-item Risk of Suicide Questionnaire (RSQ) with a larger sample of adolescents and adults in the ED setting.

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The purpose of the qualitative study was to test the reliability and validity of the RSQ in the ED. Three questions were examined in the study. First, the study examined if the RSQ is reliable when administered to adolescents and adults in the ED. Second, the study examined if the RSQ demonstrated validity in adolescents and adults in the ED. Third, the study examined if the RSQ detected suicide risk in the ED for individuals without a chief complaint of suicidal ideation. A convenience sample of 202 adolescents (n= 59) and adults (n= 143) were included with various chief complaints. The mean age for the adolescent participants was 19.3 and the mean age for the adult participants was 52.1. Adolescent gender included 39% male and 61% female. Adult gender included 40.6% male and 59.4% female. Adolescent race included 67.8% Caucasian and 27.1% African American. Adult race included 84.6% Caucasian and 14% African American. The 4-item screening tool was administered to each participant. If a patient answered “yes” to any of the questions, a positive screen was recorded. Follow-up intervention was initiated at that time for those who screened positive.

Statistical analysis was performed using SPSS version 13.0. Reliability of this tool was established as moderate utilizing a Cronbach’s alpha. Suboptimal results of reliability for the adolescent population ($\alpha = 0.46$) are not defined in this study. Suggestions for overall suboptimal reliability results ($\alpha = 0.46$) are attributed to the wide age range sample population inclusion. Pearson’s correlation was used to establish criterion-related validity. Specifically, for adolescents, questions one and two correlated positively ($p < .01$) with chief complaint, psychiatric related discharge diagnosis, and suicide related discharge diagnosis. The goal of the screening is to identify those at risk for suicide who would not otherwise self-report suicidal ideation. Specifically, in the adolescent population of this study, 91.5% presented to the ED with non-psychiatric chief complaints. Following the administration of the RSQ, 46.3% screened positive for increased suicidal risk. This demonstrates that the tool successfully identified suicide risk in adolescents who would not have been routinely evaluated for suicide risk. This study included limitation of potential for false positive screens. Question three and question four were found to show little reliability for the instrument ($\alpha = -.15$ and $.31$) which suggests that a single

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“yes” answer to only questions three or four may result in a false positive screen. This same limitation was identified in an earlier study of the RSQ (Folse, 2006).

Recommendation from this limitation include the utilization of a 2-item RSQ utilizing questions one and two to maximize identification of increased suicide risk and to minimize false positives. Recommendations include utilizing the RSQ in the ED for high risk groups, including adolescents. Consideration should be made to differentiate high risk and moderate risk. This two tiered interpretation of the screen includes additional urgent interventions for those who answer “yes” to questions one or two and possible additional screening or resource referral for those who answer “yes” to only questions three or four. Immediate attention continues to be indicated for a positive answer to questions one and/or two. Strengths of this study include the ED nursing report that this tool is easy to implement. Additionally, ED nursing reported that they would likely comply with implementation of a brief screening tool. Results showed this tool can be successfully implemented by non-mental health clinicians. Limitations of the study included a population sample that was not culturally diverse which can limit generalizability.

Recommendations support the use of the RSQ in the ED setting to improve suicide risk identification in the ED. This study qualifies as a Level VI study. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Multiple screening tools to assess suicide risk were evaluated in a study by King and colleagues (2009). This study evaluated the validity of a suicide risk screen used in a general medical ED. The purpose of the study was to examine validity and utility of an adolescent suicide risk screen in a general medical ED and obtain the prevalence of positive suicide risk screens for participants. A cross-sectional convenience sample of 298 adolescents aged 13 to 17 years old was included. Demographics of the adolescent sample included 50% males and 50% females, 83% whites, 16% blacks, and 5.4% Hispanics. Risk was evaluated utilizing the 15-item Suicidal Ideation Questionnaire-Junior (SIQ-JR), the 3-item Alcohol Use Disorders Identification Test-3 (AUDIT-3) and the 30-item Reynolds Adolescent Depression Scale-2 (RADS-2). Written completion of the screening tools was performed by the adolescent. Testing

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results screened 16% (n=48) of the 298 adolescents positive for elevated suicide risk. Data were analyzed utilizing the SPSS Version 15. Chi-square tests were used for variable category comparisons and t-tests were used for group variable comparisons. Validity of the screening tools was demonstrated via follow-up testing with the 10 item Alcohol Use Disorders Identification Test-10 (AUDIT-10), the 17-item Problem Oriented Screening Instrument for Teenagers (POSIT), the 20-item Beck Hopelessness Scale (BHS), the Services Assessment Record Review (SARR), and the 30-item Barratt Impulsivity Scale (BIS-11). Those adolescents who screened positive on the SIQ also screened positive on the BHS demonstrating validity of the SIQ screen due to previous established validity of the BHS. Internal consistencies were calculated using the alpha coefficient. High validation internal consistency was demonstrated in this sample (AUDIT-10, $\alpha = 0.92$; POSIT, $\alpha = 0.94$; BHS, $\alpha = 0.88$, BIS, $\alpha = 0.82$). Among the 48 adolescents who screened positive, nine presented with non-psychiatric reasons and 17 presented with psychiatric complaints other than suicidal ideation.

Results of the positive screens showed consistency for question results including current suicidal thinking, a recent suicide attempt, or a combination of alcohol abuse and depression. This supports the utility of a brief suicide risk screening tool. Elevated risk was determined by the presence of overlapping risk factors of current suicidal thoughts, a recent suicide attempt, or a combination of alcohol abuse and depression. The use of multiple overlapping screening tools was found to have validity for identifying elevated suicidal risk. Ninety-eight percent of the 48 adolescents who screened positive for elevated suicidal risk indicated a recent suicide attempt and/or current suicidal thoughts. This result suggests that successful screening could be shortened from the existing multiple questions screening tool to a brief screen assessing for suicidal ideation or a recent suicidal attempt. Additional conclusions revealed that 19% of those that screened positive, presented to the ED with non-psychiatric complaints and likely would not have routinely been identified as having increased suicidal risk. Limitations to this study include potential limited generalizability due to a single setting for the study. Recommendations support the use of a brief screening suicide risk assessment tool to increase identification of adolescent suicide risk for the ED. This descriptive study qualifies as

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Level VI evidence. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

A study by Boudreaux and colleagues (2016) evaluated if the use of a universal screening tool improved suicidal risk detection in the ED. The ED Safety Assessment and Follow-up Evaluation (ED-SAFE) included objectives to develop and test a standardized approach to universal suicide risk screening in the ED and to test an ED intervention of follow-up telephone contact to reduce suicidal behavior for those who screen positive. Participants included patients presenting to an ED in eight different hospitals. Three phases of the study included 1) treatment as usual, 2) universal screening, and 3) universal screening and intervention. Baseline collection generally consisted of screening for suicide risk only among those who presented with psychiatric complaints. In phase two, the Patient Safety Screener-3 (PSS-3), a three question screen assessing depressed mood, suicidal ideation in the past two weeks, and history of previous suicide attempt was implemented. A positive suicidal risk screen was identified as active suicide ideation in the past two weeks and a previous suicide attempt in the past six months. Data was collected over a five-year period at eight different hospital EDs. Overall, 236,791 ED visits were reviewed with demographics of the patients included in the study included 54.5% females, a mean age of 45, 58.3% white, 21.8% black. Increased suicide risk was found in 10,625 of those visits. Three thousand one hundred and one of those with identified increased risk participated in patient interviews. Analyses were performed using Stata, version 13.1. Documented screenings rose from 26% completion in phase one to 84% completion after the implementation of a screening tool phase two and remained at 84% completion after phase three. The implementation of a universal screening tool in the ED led to an increase in use by providers and an increase in detection of increased suicidal risk in the ED. Detection of increased risk rose from 2.9% in phase one to 5.2% in phase 2 to 5.7% in phase three. Direct patient interviews found that across all three phases, approximately 74% of patients with any intentional self-harm reported suicidal ideation or an attempt within the

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previous week. This supports that the majority of increased risk detected a recent suicidal ideation or behavior.

Conclusions from this study included that increasing documented suicide risk screening rates in the general ED population was achieved using a simple risk screen. Increasing screening led to nearly twice as many patients identified as having suicide risk. Limitations include a setting that may not adequately represent the majority of EDs throughout the nation. Results may have been artificially inflated due to interpreter bias. Research assistants were required to determine if self-harm is classified as suicidal or not. This “landmark finding” as identified by the researchers, recommends universal screening to improve identification of suicide risk and create opportunity for interventions to prevent suicide completion. This time series study qualifies as Level III evidence including non-experimental study. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

A study by Horowitz and colleagues (2012) evaluated suicide risk assessment in adolescents in order to develop a brief screening instrument to be utilized in the ED for those admitted for medical/surgical complaints. A convenience sample of 524 adolescents presenting to three urban EDs with either medical/surgical or psychiatric complaints was included in the study. Participants answered seventeen screening questions related to suicide risk factors for adolescents including suicide attempt history, suicidal ideation, depression, hopelessness, substance abuse, and social isolation. A follow-up Suicide Ideation Questionnaire (SIQ) was implemented to validate criterion standard. Statistical analysis to establish validity between the two questionnaires was conducted using the chance-correlated kappa statistic (k). Regression models were utilized to evaluate all possible combinations of questions. Four questions were found to be prevalent in the risk factor assessment and the SIQ in those that were evaluated as having increased risk for suicide. Those four questions included 1) current thoughts of being better off dead, 2) current wish to die, 3) current suicidal ideation, and 4) past suicide attempt. Analysis of these four questions resulted in a sensitivity of 96.9%, a specificity of 87.6%, a negative predictive value of 99.7% for medical – surgical patients, and a negative predictive

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value of 96.9% for psychiatric patients. These areas of sensitivity, specificity, and negative predictive value were highlighted to minimize the number of false positive risks screens.

Elevated suicide risk was found in 18.7% of participants (n = 98). Logistic regression analysis revealed that there was little increase in positive results based on questions beyond the four supportive questions.

These results led to the development of a 4-item Ask Suicide-Screening Questions (ASQ) tool. The strength of this study include that the ASQ is found to have good content validity. The four include questions assessing suicide risk factors in a manner in which youth can relate, leading to increased response from youth. Only one of the 311 participants screened positive for suicide risk following a negative ASQ result with the standard SIQ. The high specificity demonstrated the ability to correctly identify those adolescents who are not at risk. This is important for maintaining time constraints in the busy ED setting. A positive logistical regression for medical-surgical patients indicated that a positive screen on the ASQ was 15.2 times more likely to be seen in those patients with actual suicide risk than in someone not at increased risk. Limitations include participants were from an urban setting and the results may not be generalizable to other locations. Conclusions include that the ASQ is a brief tool that is highly sensitive, specific, and has a high negative predictive value that can be rapidly implemented in an ED setting to increase the identification of increased suicidal risk in adolescents. This study qualifies as a Level VI study. This study is appraised a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Table 2.4

Ask Suicide-Screening Questions (ASQ)

1) In the past few weeks, have you wished you were dead? _____ Yes _____ No

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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

(National Institute of Mental Health, 2015)

National Guideline Summaries

Two guidelines are included with a meta-analysis. These guidelines address issues of suicide risk assessment and specifically name tools recommended for use.

Guideline Summary NGC- 10061 is entitled Clinical Practice Guideline: Suicide Risk Assessment. This guideline was created following a thorough review and critical analysis of literature. The Emergency Nurses Association (2012) evaluated risk assessment tools and predictors that are effective in screening for self-harm or suicidal ideation during initial assessment for patients across the lifespan in the ED. The target population includes those patients who present to the ED with suicidal ideation or high risk for future suicide attempt. Multiple screening tools were evaluated for accuracy, sensitivity, and specificity of suicide risk assessment. Guideline recommendations are based on evaluations of the evidence. Level A high recommendations include that suicide screening tools should be used as a part of the assessment process of appropriate emergency patients. Level B moderate recommendations include screening for risk of suicide on pediatric patients over age ten based on presentation. Included as level B moderate recommendation for acceptable suicide risk instruments that are feasible, valid, and reliable measures for the ED setting. Level A high evidence of suicide risk predictors includes assessing for previous episodes of deliberate self-harm which is a strong predictor of a future suicide attempt.

The Working Group of the Clinical Practice Guideline for the Prevention and Treatment (2012) issued a clinical practice guideline for prevention and treatment of suicidal behavior that includes levels of recommendations and good clinical practice (GCP) recommendations for assessing patients in the emergency department. Guideline summary NGC-10354 is entitled Clinical Practice Guideline for the Prevention and Treatment of Suicide Behavior. Screening for

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suicide risk includes C recommendations that are based on a body of evidence consisting of studies rated as 2++ which includes systematic review of well controlled case control and cohort studies. In the ED it is recommended to conduct suicide risk screening in adolescents with the presence of suicide risk factors, associated stress factors, and even if attending for other reasons than suicidal ideation. To assess suicide risk in children or adolescents, it is recommended to ask directly about suicidal ideation or planning, past suicidal behavior, and other existing risk factors. For assessing and managing patients in the ED, GCP recommendations include assessing patients for suicidal behavior in an atmosphere of privacy, confidentiality, and respect. Evidence level D findings include findings from well controlled case control or cohort studies. Level D recommendations include utilizing a systematic assessment (standard form) of the risk factors and recording the most relevant risk factor of any history of suicide attempts.

These two clinical practice guidelines are Level I evidence based on the seven level evidence tier by Melnyk & Fineout-Overholt (2011). It is a systematic review and meta-analysis. These two guidelines were evaluated for quality utilizing John Hopkins nursing evidence-based practice model and guidelines. These guidelines are appraised as a high level of evidence that can be applied to support evidence-based practice for identifying adolescents with increased suicide risk in the ED.

Construction of Evidence-based Practice

With the implementation of a change in adolescent suicide risk assessment, the reviewed literature included quantitative and qualitative data indicating reasons why suicide risk assessments fail to succeed. Specifically, these results indicate that risk assessments may not be successful due to lack of privacy, lack of time, lack of qualified staff, and lack of follow-up for screening results (Petrik et al., 2015). Additionally, there is a need for a universal brief screening tool to increase the identification of increased suicidal risk (Betz et al, 2015; Horowitz et al., 2010; & King et al., 2009). Changes to improve risk assessment should include options for provider and patient privacy, limited time requirements, follow-up resource availability, direct

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questions, and specific screening protocols (Petrik et al., 2015; Ballard et al., 2013, Betz et al., 2015; & Horowitz et al., 2010).

Various screening tools have been developed for use in the ED. Although, multiple screens (SIQ, RSQ, BHS) have proven to be valid, specific, and sensitive, they often contain multiple questions that require additional time that is not available in the ED during routine treatment (King et al., 2009). Recommendations have been made to develop a brief screening tool that can be utilized by ED nurses with minimal training, can be rapidly administered, and will increase identification of increased suicide risk. The evidence shows commonalities throughout these screenings that indicate increased suicide risk (Horowitz et al., 2001; Folse et al., 2006; Folse et al., 2009; King et al., 2009; Horowitz et al., 2012). These commonalities include current suicidal thoughts and history of suicide attempt. The 4-item RSQ has been utilized as a successful tool for adolescents with both psychiatric and non-psychiatric chief complaints in the ED. Its use in the emergency department has been implemented successfully by nursing staff without the need for extended training (Horowitz et al., 2001; Folse et al., 2006; & Folse et al., 2009). The tool specifically identifies those with high risk for suicide. The limitations to the RSQ are concerning for an increased number of false positives which have been found in more than one study (Horowitz et al., 2001; Folse et al., 2006; & Folse et al., 2009). The SPSS-3 is a 3 item screen that has been successfully used with adolescents in the ED (Boudreaux et al., 2016). When this tool is utilized in the ED, immediate intervention is available for those at high risk and follow-up referral can be provided for those with an increased risk. The limitation with this tool are also an increased number of false positives (Boudreaux et al., 2016). The concern for utilizing either the RSQ or the PSS-3 is the potential for false positives. With the occurrence of false positives as an excuse for not implementing a suicide risk assessment in the ED, these two brief assessment tools are not the best evidence choice for a suicide risk tool to implement.

Best Practice Model Recommendation

The Ask Suicide-Screening Questions (ASQ) tool is a brief screening tool that has been shown to effectively identify an increased risk of suicide in adolescents regardless of chief complaint (Horowitz et al., 2012). It can be implemented for those seeking psychiatric care as

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well as medical/surgical care. It can be administered rapidly and does not require extensive training to complete (Horowitz et al., 2012). It has improved statistics of specificity leading to lower rates of false positives. A positive screen on the ASQ was 15.2 times more likely to be seen in those patients with actual suicide risk than in someone not at increased risk (Horowitz et al., 2012). The goal of the National Institute of Mental Health (NIMH) is to identify through research the most effective strategies for preventing suicide for the greatest number of people. The NIMH supports the use of the ASQ as an effective screening tool to improve suicide risk identification in the ED. The ASQ is a brief tool that is highly sensitive, specific, and has a high negative predictive value that can be rapidly implemented in an ED setting to increase the identification of increased suicidal risk in adolescents. This tool can be successfully implemented as best practice for improving adolescent suicide risk identification in the ED.

How the Best Practice Model will Answer the Clinical Question

The clinical question motivating this EBP project and evaluation of current literature includes seeking the best way to improve adolescent suicide risk identification in the ED. The implementation of a standard universal screening tool will lead to increased assessment completion frequency by nurses that can lead to improved identification of adolescents with increased suicide risk in the ED (Boudreaux et al., 2016). Utilizing a standard screening tool will enable ED nurses to rapidly identify increased suicidal risk in adolescents while avoiding additional time requirements or mental health experience that may have led ED nurses to avoid completing the screening (Petrik et al., 2015). As the completion rates increased, not only did risk identification rates increase, but also nursing self-reported confidence levels in assessment skills improved (Betz et al., 2015). Nurses are the front line provider of care in the ED and this role provides a vital opportunity to identify an adolescent with increased suicide risk. The successful implementation of a standardized tool will improve performance as evidenced through increased completion rates. Improved performance will lead to increased confidence and more positive attitudes toward risk assessment. An improved attitude increases motivation to consistently provide the highest level of clinical care. Implementation of the ASQ will facilitate

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an improved ED nursing attitude toward suicide risk assessment closing the gap of missed opportunity of adolescent suicide prevention in the ED.

CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

The seventh step in the Iowa Model Revised includes designing a practice change (Buckwalter et al., 2015). As the practice change is designed, the Iowa Model Revised identifies specific steps in the process: 1) engaging patient preferences, 2) considering resources, constraints and approval, 3) developing a localized protocol, 4) creating an evaluation plan, 5) collecting baseline data, 6) developing an implementation plan, 7) preparing clinicians and materials, 8) promoting adoption, and 9) collecting and reporting post-pilot data (Buckwalter et al., 2015). The purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide risk assessment following implementation of a new suicide risk tool for adolescents in the emergency department. The conclusions that were identified through the review of literature supports the implementation of a brief suicide screening tool for adolescents in the emergency department to improve increased suicide risk identification. Based on the review of evidence, the Ask Suicide-Screening Questions (ASQ) tool can be implemented by

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nurses in the ED to improve adolescent suicide risk identification. The PICOT question that was used for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)?

Participants and Setting

The setting for this EBP project was the emergency department of a community hospital in Midwest America. This community non-profit hospital is a general medical and surgical hospital with approximately 100 inpatient beds. The emergency department includes a 16 bed unit that evaluates approximately 29,500 patients annually. The ED offers all aspects of emergency department care including cardiac, cerebrovascular, orthopedic, surgical, and psychiatric care for adult and pediatric patients. The ED operates a fast track option to expedite service during the high volume hours of 11 am to 11 pm that provides care for low acuity illness and injury. In 2015, 2436 adolescents were evaluated in the ED (Schneck Medical Center [SMC], 2015). Population of the county in which the facility was located was approximately 44,000 residents in 2015 (US Department of Commerce, 2015). The facility advertised a mission to improve the health of its community. Emergency services are provided to the county in which it is located and outreach includes three surrounding counties which only offer critical health access facilities. This facility marketed an emphasis on efficient and safe care for all patients. Suicide assessment is a preventative effort that improves safety for the residents of the community. This example of community focus was supported in the Iowa model of EBP dissemination.

Participants for the project to improve suicide risk assessment in the ED included the registered nursing (RN) staff in the ED. Nurses are the front line provider of care in the ED and this role provides a vital opportunity to identify an adolescent with increased suicide risk. The attitudes of the nurses as they perform a suicide risk assessment directly affects the validity of the results and overall suicide risk identification and prevention. A convenience sample was utilized to include all nurses employed in the ED. The ED staff consisted of 28 full time RNs and

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6 part-time/prn RNs. Years of nursing experience ranged from less than one year to 18 years. The ED staff included both females and males. Education included BSN prepared nurses and ASN prepared nurses who were are currently enrolled in a BSN completion degree program to comply with Magnet status guidelines.

The current practice for ED staffing included the nursing staff alternating roles throughout the ED including triage admission, intake (fast track) admission, and main ED admission. During any of these admission phases, the health history was obtained including the suicide risk assessment. Current practice included the implementation of a single question history of suicide attempt assessment without obtaining additional consent for adolescents ages 15 to 19 presenting to the emergency department regardless of chief complaint. If the adolescent has a prior ED visit, the previous suicide risk assessment was recalled into the current visit history. This provided an answer to the suicide risk question, and the ED staff could potentially defer repeating the suicide assessments with subsequent ED encounters.

Planning

Baseline data for this project was collected by the project manager. A one-month chart review of adolescents presenting to the ED was obtained to include information including age, gender, ED chief complaint, and response to the current suicide risk assessment question. This information was compared with similar data collection obtained during the one-month project implementation period. It was anticipated that a standardized tool will identify additional adolescents with increased suicide risk which provides additional motivation for ED nurses to utilize this tool on all adolescents presenting to the ED.

This EBP project began with the administration of a questionnaire assessing attitudes of ED nurses toward suicide prevention. Evaluating ED nurses' attitudes toward suicide prevention was an important step in improving the overall process of improving adolescent suicide risk assessment. The Attitudes Toward Suicide Prevention (ASP) scale was utilized to evaluate attitudes of nurses toward suicide prevention. The ASP scale (Table 3.1) was completed by all ED nurses who agreed to complete the screening. Although the ASP screening was not mandatory, the staff were encouraged to complete this questionnaire in support of this

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project. In clinical practice, suicide prevention depends in part on the assessment and management of risk by health professionals including emergency department staff. It is known that who commit suicide often have been in recent contact with someone within a health care setting (Herron, Ticehurst, Appleby, Perry, & Cordingley, 2001). An important factor that influences the assessment of suicide risk includes the attitudes of these staff toward suicide prevention (Herron et al., 2001). For example, negative attitudes may make staff less likely to assess risk with accuracy (Herron et al., 2001). The ASP scale includes the assessment of the following themes related to nursing staff attitudes 1) the accuracy of suicide risk assessment in clinical practice, 2) the interpretation of expressions of suicidal intent, 3) the responsibility of a clinician in preventing suicide, 4) the practicality of preventing suicide in clinical practice, 5) the preventability of suicide in general, and 6) the impact of nonclinical factors on suicide rates (Herron et al., 2001). Each question in the 14-item ASP elicits a response on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree" with a scoring range from 14 to 70. Lower scores indicate a more positive attitude toward suicide prevention and higher scores indicate a more negative attitude toward prevention. The ASP is able to collect information on the attitudes toward suicide prevention in front-line health professionals. Internal consistency was assessed using a factor analysis for the 14-item scale with a Cronbach's alpha of 0.77. Test-retest reliability was high for the 14-item questionnaire with a correlation coefficient of 0.85 ($p < .001$). Modification of the scale for this project included the addition of three questions regarding the demographic identifiers of the participants that will be assessed: 1) what is your gender, 2) how many years of nursing practice do you have, and 3) what is your level of education (Table 3.2)? Demographic information was collected for the purposes of the project only. Completion of the ASP scale and demographics was voluntary. Participants chose to complete some or all of the items. Refusal to participate in the survey did not affect job status. Completion of the survey was considered informed consent and a statement of consent and confidentiality was included with the survey (Table 3.1).

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The Attitudes toward Suicide Prevention Scale (ASP)

Participation in this study is voluntary. Answer as many questions as you like. All answers will be kept confidential. The information obtained from this survey will only be used for purposes of this study. By completing this survey, you are giving informed consent to participate in this study.

Thank you for your participation in my project. Julie Simpson

Survey Identifier- Please list your birthday (month/date) _____

		Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1.	I resent being asked to do more about suicide.					
2.	Suicide prevention is not my responsibility.					
3.	Making more funds available to the appropriate health services would make no difference to the suicide rate.					
4.	Working with suicidal patients is rewarding.					
5.	If people are serious about committing suicide they don't tell anyone.					
6.	I feel defensive when people offer advice about suicide prevention.					
7.	It is easy for people not involved in clinical practice to make judgements about suicide prevention.					
8.	If a person survives a suicide attempt, then this was a ploy for attention.					
9.	People have the right to take their own lives.					
10.	Since unemployment and poverty are the main causes of suicide, there is little that an individual can do to prevent it.					

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11.	I don't feel comfortable assessing someone for suicide risk.					
12.	Suicide prevention measures are a drain on resources, which would be more useful elsewhere.					
13.	There is no way of knowing who is going to commit suicide.					
14.	What proportion of suicides do you consider preventable? (None-All)					

Table 3.2

Demographic Data for RNs completing the ASP tool

What is your gender? Male_____ Female_____

What is your age? _____

How many years of nursing experience do you have? _____

What is your highest level of education? MSN___BSN___ASN___LPN___

This survey was implemented prior to an educational opportunity emphasizing the need for adolescent suicide risk assessment and the plan for implementation of the ASQ tool. This EBP project PowerPoint presentation incorporated knowledge gained from the literature review articles and the conclusions for the planned intervention. Resources needed for implementation of the ASQ tool included providing education to the ED staff. This education included a twenty-minute PowerPoint presentation provided by the project manager. This presentation included an overview of the background of the problem, a concise review of the

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literature supporting the need for change, the evidence based findings to address the change, an explanation of the ASQ assessment tool and implementation process of the project. The ASQ can be implemented by ED staff without need for extensive additional training (Horowitz et al., 2012). This education was completed during two regularly scheduled mandatory monthly staff meetings prior to implementation of the tool. Following the presentation, a discussion session included an open question and answers time for staff regarding the project.

Participation in this educational opportunity and utilization of the ASP tool within the ED assessment was required for all staff. For those nurses who were unable to attend either of these meetings, the project manager provided the information in printed handouts of the presentation material and brief face-to-face interaction opportunities for questions during shift duty time (Appendix A).

An informal brief meeting occurred between the project manager and the ED chief provider. The agenda for this meeting included the EBP practice change, the ASQ tool, and how these changes may affect provider care and documentation within the ED. All questions and concerns were answered. Any requested further education for providers was completed by the project manager at the chief provider's request.

Implementation of Intervention

The ASQ was incorporated into the EMR within a month of the education provided. The ED RNs began to utilize the ASQ tool on all adolescents seeking treatment in the ED regardless of complaint. The questionnaire was completed by the admitting RN during the admission process into the emergency department. The brief questionnaire takes less than two minutes to complete (Horowitz et al., 2012). There was no delay in medical treatment to complete the assessment tool. The questions were included in the routine screening portion of the medical record. The health history assessment and screening was completed by the admitting RN during the admission process. Included in the health history and screening are detailed question about past medical conditions, past surgeries, current medications, frequency of alcohol and tobacco use, recent international travel and current living situation. The ASQ suicide risk assessment was incorporated in this health history. There was previously a single question that

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inquired if there has been a previous suicide attempt. There was a box that could be checked with a “yes” or “no” response. If the response was “yes”, there was additional room to include the date and method of the previous suicide attempt. During the implementation phase of this project, the 4-item ASQ was included in the electronic medical record (EMR) within the ED routine screening section of the health history. The risk assessment elicited responses for the following 1) in the past few weeks, have you wished you were dead, 2) in the past few weeks, have you felt that you or your family would be better off if you were dead, 3) in the past week, have you been having thoughts about killing yourself and 4) have you ever tried to kill yourself? A fifth question has been added to the current ASQ in the event of a positive response to any of the previous questions and inquires if the patient is having thoughts of killing himself or herself right now (Horowitz, 2016).

Specific patient preferences identified in the review of literature included those specifically obtained from adolescents. These preferences were identified as a need to be asked directly about suicide ideation and intent and that nurses should directly asking kids about suicide during emergency department encounters (Ballard et al., 2013). The implementation of suicide risk screening is supported by adolescents to improve identification of youth at risk who would not otherwise have disclosed thoughts or feelings, to offer an additional source of suicide prevention, to develop a therapeutic relationship between nurse and patient, to provide an opportunity for obtaining mental health resources, and to provide an objective resource that youth who are otherwise isolated may turn to for help (Ballard et al., 2013). Every opportunity for privacy with the adolescent to obtain the screening information was made by the RN as this improves honesty with the results (Petrik et al., 2015). These identified patient preferences were included in the education information for the ED staff.

The ASP scale was repeated as a post-survey to ED nurses on a voluntary basis following the implementation of the ASQ project. Pre and post test results were linked with an individual identifier (birthday month and date) to be placed in the upper right corner of the survey. It was anticipated that the implementation of a standardized tool that improves identification of adolescents with increased suicide risk will improve nurses' attitudes toward

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suicide prevention in the ED. The findings of the pre-project ASP results were compared to the post-project results. Results were reported in aggregate format. Results were maintained in a locked file cabinet at the project managers home and will remain there for three years following the project. Results were also maintained electronically within a password protected computer file.

Constraints to project implementation included challenges with addressing an identified positive suicide risk screen. Previously, all ED patients were asked if there has been a previous suicide attempt. Even if the patient responded with a “yes” answer, there were no additional measures taken unless the admitting chief complaint is suicidal ideation, suicide attempt, or psychiatric in nature. If the admitting chief complaint included a psychiatric diagnosis, the psychologist that responds for evaluation completed any additional suicide risk evaluation. With the implementation of the ASQ screening tool, a positive screen required additional measures by the nursing staff. A “yes” response within the EMR was highlighted and this required an acknowledgement from the provider. The ED nurse was responsible for completing the assessment screen and submitting the information into the EMR. All positive results would become the responsibility of the provider who would be required to acknowledge this finding within the health history review of the EMR. This need for any additional interventions in response to the screening was implemented and documented by the provider.

Outcomes

Outcomes of the assessment tool responses were briefly evaluated by the ED admission nurses. A positive screen was defined as a “yes” response to one or more of the four questions. If there was a “yes” response to one or more of the four ASQ questions, the ED provider was notified through the EMR. The positive screen required an acknowledgement within the EMR by the provider. The documentation of a “yes” response within the EMR health history was highlighted requiring acknowledgement by the provider as the electronic charting documentation of the ED visit was completed. This highlighted section required acknowledgment by the provider, who responded to the positive screen as dictated by their scope of practice. The ED nurse was responsible for completing the tool and the electronic documentation of the results.

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The provider assumed responsibility for addressing the increased suicide risk including immediate referral for mental health evaluation, follow-up referral for mental health evaluation, or discharge resource information provided. If the chief complaint was psychiatric in nature, the psychologist routinely responded for an in depth psychiatric evaluation and referral. If the chief complaint is medical in nature, the provider requested a psychiatric evaluation following medical stabilization if the patient is identified as having a life-threatening suicide risk. If the provider determines the suicide risk to be non-life threatening, discharge instructions were include with appropriate psychiatric evaluation recommendations and referral as directed by the provider.

The consenting parent or guardian was notified of any positive suicide risk screens by the provider. Suicide, or the threat of self-harm, is one circumstance when a health care provider is legally required to report confidential patient information. The safety of the patient becomes the priority of care, and the accompanying parent or guardian will be made aware of the findings as well as the plan of care.

The completed assessment screen results were reviewed by the project manager and positive results were tallied over the one-month course of the project. The total number of positive screens and the total number of negative screens were identified. Additionally, information collected for the project included presenting chief complaint, age and sex of the adolescent (Table 3.3). All completed screens remained within the facility EMR charting system. The EMR system is security protected by administrative, technological, and physical safeguards. Data for the project will remain locked and maintained for three years following the conclusion of the project.

Table 3.3

Project Implementation EMR Data Collection

	Current Practice Positive Screen x 1 month	Current Practice Negative Screen x 1 month	Total Number Current Practice Screens	ASQ Tool Positive Screen x 1 month	ASQ Tool Negative Screen x 1 month	Total Number ASQ Tool

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Male						
Female						
Age 15						
Age 16						
Age 17						
Age 18						
Age 19						
Psychiatric Complaint						
Medical Complaint						

At the completion of the one-month project, the results of the tool implementation were evaluated. The ED averages 150 to 175 adolescent visits per month. For one month prior to implementation of the project, the current processes were assessed for the number of positive suicide risk screens as evidenced by a “yes” response to the assessment question if there has been a previous suicide attempt. The current number of documented positive suicide risk screens were compared with the number of positive risk screens utilizing the ASQ. An increase in number of adolescents that screen positive for suicide risk with the ASQ as compared to the number of adolescents identified during the same time frame utilizing the current practice supported the evidence as successful in improving the identification of increased suicide risk in the ED. The improved outcome was maintained by permanently including this tool within the computerized EMR health history assessment.

Data and Analysis

Data collected included the age of the adolescent, sex of the adolescent, the chief complaint for the ED visit, and the results of the ASQ. The number of ED adolescent admissions with positive ASQ screens were compared with chart review data of adolescent admissions with a positive suicide risk screen with the current practice.

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The ASP scale was repeated as a post-survey to all ED nurses following the implementation of the ASQ project. The findings of the pre-project ASP results were compared to the post-project ASP results. The ASP can reliably assess the attitudes of health professionals. With the implementation of an educational event, the completion of a new screening tool, and the knowledge sharing of obtained data, improved attitudes toward suicide prevention among health professionals were desired. Improved attitudes lead to successful implementation of the risk assessment tool which can identify additional youths with increased suicide risk.

The impact of the educational intervention and implementation of the new assessment tool were measured with a comparison of the ASP pre-test/post-test results. This allowed for comparison of baseline data before the educational intervention and tool implementation with data after the educational intervention and tool implementation. Descriptive statistics were derived from the completed sociodemographic information that was included with the ASP questionnaire. All data was placed into a SPSS statistical software program. A paired *t*-test was utilized to compare results from pre-project implementation to post implementation. The results indicated an improvement in nursing attitudes toward ED suicide risk assessment occurred.

The results of the EBP project were disseminated to the ED staff during a staff meeting following the completion of the project. The project manager reviewed pre and post ASP results from staff. The project manager reviewed the change in risk screening results following the implementation of the ASQ. The information was delivered during two monthly staff meetings and included in the meeting minutes for those staff who are not in attendance. Any questions from the staff were answered by the project manager and the ASP results were considered as this tool is implemented into permanent practice to include recommendations for additional suicide prevention education if needed.

Measures and their reliability and validity

The 4-item Ask Suicide-Screening Questionnaire (ASQ) includes four questions 1) current thoughts of being better off dead, 2) current wish to die, 3) current suicidal ideation, and 4) past suicide attempt. Previous analysis of these four questions resulted in a sensitivity of 96.9%, a specificity of 87.6%, a negative predictive value of 99.7% for medical – surgical patients, and a

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negative predictive value of 96.9% for psychiatric patients. These areas of sensitivity, specificity, and negative predictive value were highlighted to minimize the number of false positive risks screens. The high specificity demonstrated the ability to correctly identify those adolescents who are not at risk. A positive logistical regression for medical-surgical patients indicated that a positive screen on the ASQ was 15.2 times more likely to be seen in those patients with actual suicide risk than in someone not at increased risk (Horowitz et al., 2012). The reliability and validity of this tool will be reviewed with the staff during the pre-implementation education.

The ASP questionnaire reliably assesses the attitudes of health professionals. Each question in the 14-item ASP elicits a response on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The ASP is able to collect information on the attitudes toward suicide prevention in front-line health professionals. Internal consistency was assessed using a factor analysis for the 14-item scale that had a range of 14-70 with a Cronbach's alpha of 0.77. Test-retest reliability was high for the 14-item questionnaire with a correlation coefficient of 0.85 ($p < 0.001$). This scale has been utilized previously in studies evaluating nursing attitudes toward suicide prevention (Appleby, Morriss, Gask, Roland, Perry, Lewis ...Faragher, 2000; Brunero, Smith, Bates, Fairbrother, 2008; & Nebhinani, Mamta, Achla, & Gaikwad, 2013). The reliability and validity of the ASP will be reviewed with the staff during the post-implementation dissemination of results.

Protection of Human Subjects

It is mandatory to provide the protection of all human subjects when implementing any form of study intervention. The focus of this project were ED nurses who were implementing a new tool to improve patient safety. The nurses were asked by the project manager to complete the ASP questionnaire in support of this project, but they were not required to do so. The nurses were be required to complete the ASQ screening tool as included in the health history data collection as the expected nursing job performance. The project manager completed institute review board (IRB) training through the National Institutes of Health as required by the educational organization and the facility project site. The project was reviewed by the project facility IRB and the educational institution IRB. The purpose of the project, the implementation

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plan, and the outcome goals were evaluated by the educational facility and the project site facility to ensure there were no risks during the process.

Chapter 4

The clinical question that motivated the development of this EBP project focused on seeking if nursing attitudes affect adolescent suicide risk identification in the ED. The purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide risk assessment following education and implementation of a new suicide risk tool for adolescents in the emergency department. Implementation of this project improved current standards of practice that meet TJC requirements of addressing suicidal risk in all patients (TJC, 2014). This chapter will discuss results used to answer the PICOT question. The PICOT question utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)? This PICOT question was answered as data analysis was completed following the implementation of the project.

Participants in the Study

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This EBP project was completed at a Midwest America community hospital emergency department. To begin implementation of the project, all the ED nursing staff were required by management to attend a mandatory training that provided information about the crisis of adolescent suicide and the evidence-based recommendations for the implementation of a new adolescent suicide risk assessment tool. Prior to the education and training, all nurses who attended the mandatory trainings were also asked to voluntarily participate in the EBP project by completing the baseline Attitudes toward Suicide Prevention (ASP) scale and answering questions focused on demographic characteristics. The Ask Suicide-Screening Questionnaire (ASQ) was implemented following the training to be completed by all nurses as a practice change for all adolescents seeking treatment in the emergency department.

Adolescent risk screening data were collected for one month prior to the implementation of the ASQ screening tool (Table 4.1). Data included age, gender, initial complaint, and history of suicide attempt. The method of screening that existed prior to project implementation included a single question eliciting if there was a previous suicide attempt. Although a previous suicide attempt is the highest indicator for suicide risk, this information was recorded into the EMR without additional follow-up. Even if the patient responded with a “yes” answer, there were no additional measures taken unless the admitting chief complaint was suicidal ideation, suicide attempt, or psychiatric in nature. If the admitting chief complaint included a psychiatric diagnosis, the psychologist that responded for additional mental health evaluation completed any additional suicide risk evaluation. Over the one month period of pre-implementation, a total of 174 adolescents age 15 – 19 presented to the ED. The daily average of adolescent admissions equaled 5.8 adolescents per day. There were 18 adolescents who reported a previous suicide attempt for a total percentage at 11.5%.

Table 4.1

Project Implementation EMR Data Collection

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	Prior ASQ Practice Positive Screen x 1 month	Prior ASQ Practice Negative Screen x 1 month	Total Number Prior ASQ Practice Screens	ASQ Tool Positive Screen x 1 month	ASQ Tool Negative Screen x 1 month	Total Number screened ASQ Tool
Male	7	67	74	7	34	41
Female	11	89	100	12	93	105
Age 15	3	24	27	4	24	28
Age 16	2	24	26	6	29	35
Age 17	2	41	43	5	26	31
Age 18	5	32	37	3	24	27
Age 19	6	35	41	1	26	27
Psychiatric Complaint	10	--	--	12	--	--
Medical Complaint	8	--	--	7	--	--

Suicide risk screening data including age, gender, complaint and ASQ screen results were then collected for one month during the implementation of the ASQ screening tool. A total of 160 adolescents presented to the ED during this one month time frame. The average number of adolescents seeking treatment for this one month period following the implementation of the ASQ was 5.3 adolescents per day. There were 14 adolescents who were not screened for suicide risk. Although specific reasons for not completing the screen were not documented, various reasons exist for failure to complete the screening. These include but are not limited to the following: patient refusal, parent or guardian refusal, patient unable to complete due to medical condition, nursing lack of documentation or nursing failure to complete the screening. There were 19 positive suicide risk screens with the implementation of the ASQ tool for a total percentage of adolescents with a positive suicide risk screen at 13%. There were 12 positive screens for adolescents that presented with psychiatric complaints. There were 7 positive screens for adolescents that presented with non-psychiatric complaints.

There was an increase in the number of adolescents identified with increased suicide risk following the implementation of the ASQ tool. Initial practice included 11.5% overall

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adolescents with positive risk resulting from a history of suicide attempt and the practice change included a 13% overall adolescents found with positive suicide risk from the ASQ screening tool. The practice change also included provider follow-up for all positive ASQ screens. Each provider was required to acknowledge all positive suicide risk screens and implement appropriate interventions as needed. The review of literature supported the need to evaluate all adolescents seeking treatment in the ED and not isolating this assessment to only psychiatric complaints. Previously, within the project facility, only those adolescents who presented with a psychiatric complaint received additional suicide risk assessment and intervention beyond the initial inquiry for history of suicide attempt. The identification of increased suicide risk for 7 adolescents who presented with non-psychiatric complaints provided additional support for the practice change of the ASQ tool implementation for all adolescents seeking treatment in the ED.

Results following one month of the ASQ practice change implementation were shared with ED nurses at a staff meeting. Those nurses in attendance were asked to voluntarily complete a post-intervention ASP screen as part of the EBP project to assess nursing attitudes toward suicide prevention.

Reliability and Validity of Scale

Each question in the 14-item ASP is designed to elicit a response on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree" with a possible scoring range from 14 to 70. Lower scores indicate a more positive attitude toward suicide prevention and higher scores indicate a more negative attitude toward suicide prevention. The ASP scale collects information on the attitudes toward suicide prevention in front-line health professionals. The ASP scale includes the assessment of the following themes related to nursing staff attitudes 1) the accuracy of suicide risk assessment in clinical practice, 2) the interpretation of expressions of suicidal intent, 3) the responsibility of a clinician in preventing suicide, 4) the practicality of preventing suicide in clinical practice, 5) the preventability of suicide in general, and 6) the impact of nonclinical factors on suicide rates (Herron et al., 2001). This scale has been previously implemented with documented with good results of reliability and validity (Herron et

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al., 2001). In the study that developed and tested the ASP scale (Herron et al, 2001), internal consistency was assessed using a factor analysis with a Cronbach's alpha of 0.77 for the 14-question scale. Test-retest reliability was high for the 14-item questionnaire with a correlation coefficient of 0.85 ($p < .001$). This test-retest reliability indicates that results of this scale are consistent over time.

Size

A total of 25 nurses completed the ASP scale and demographic questionnaire at either the initial staff training or the follow-up staff meeting. There were 18 nurses who completed the scale pre-intervention and 14 nurses who completed the scale post- intervention. There were 7 nurses who completed both the scale both pre and post intervention.

The facility emergency department includes 27 full time nurses and 4 part time / prn nurses. The opportunity existed to assess the attitudes of 31 nurses. The total of 25 participants equaled an 80% participation rate. Those not included are cited as absent from the staff mandatory training due to various reasons including vacation, schedule conflict, illness, or unknown.

Characteristics

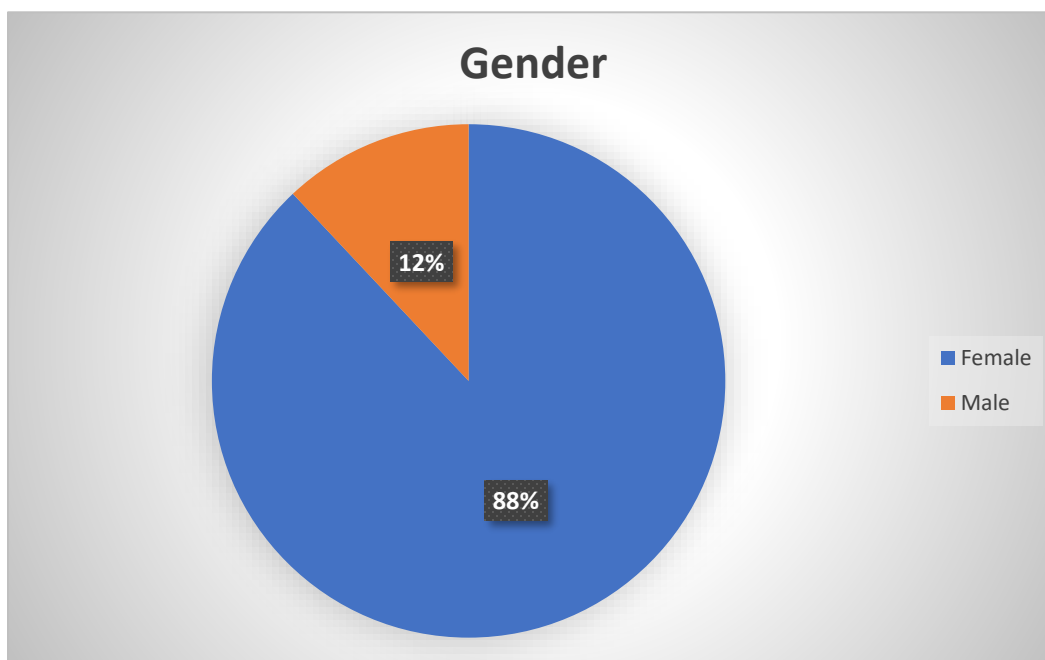
Demographic data that were collected in addition to the ASP scale included the gender of the nurse, the age of nurse, the years of nursing experience, and the highest level of education. All data were entered into the IBM SPSS 23.0 program for analysis. The average age of all the participants was 38.16 years ($SD=12.67$) with a range of 39 (22 years old to 61 years old). Identified gender of participants included 3 male (12%) and 22 female (88%) nurses (Graph 4.1). Years of nursing experience included an average of 9.16 years ($SD= 7.40$) with a range of 33 (1 year to 34 years). There were 12% ($n=4$) of nurses who reported experience within 11 to 15 years and 12% ($n=4$) of nurses who reported experience greater than 20 years. These were the two largest distribution for nursing experience. Nursing highest level of

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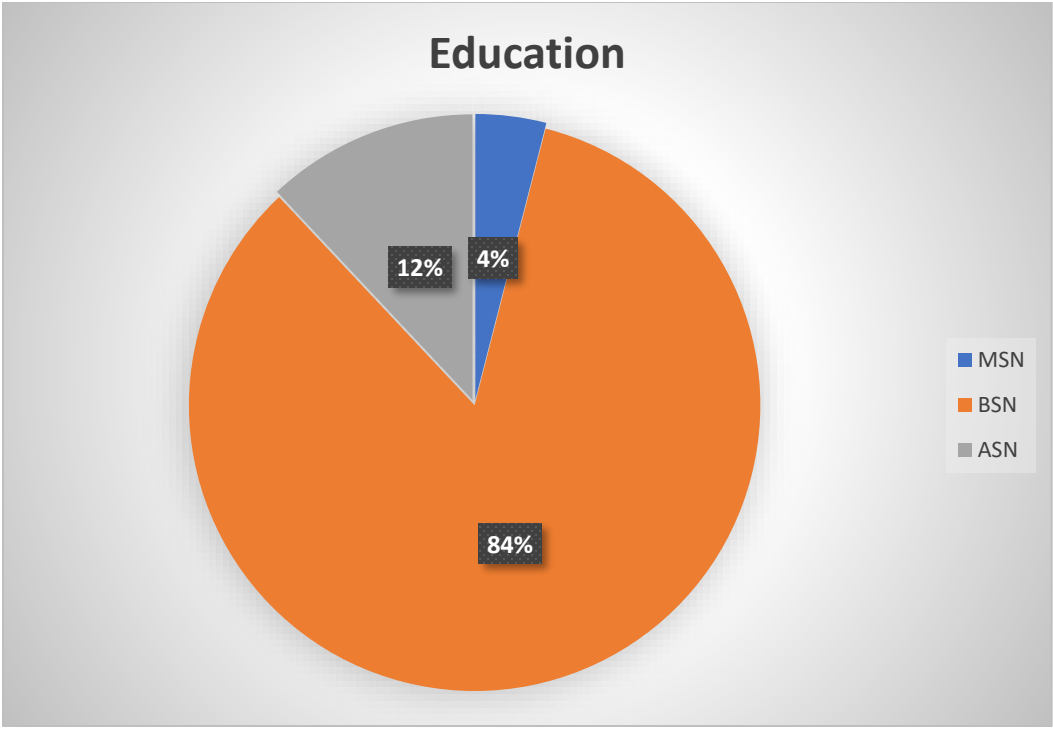
education included 1 MSN (4%), 21 BSN (84%), and 3 ASN (12%) prepared nurses (Graph 4.1).

Figure 4.1

Gender and Education Characteristics of Total Sample



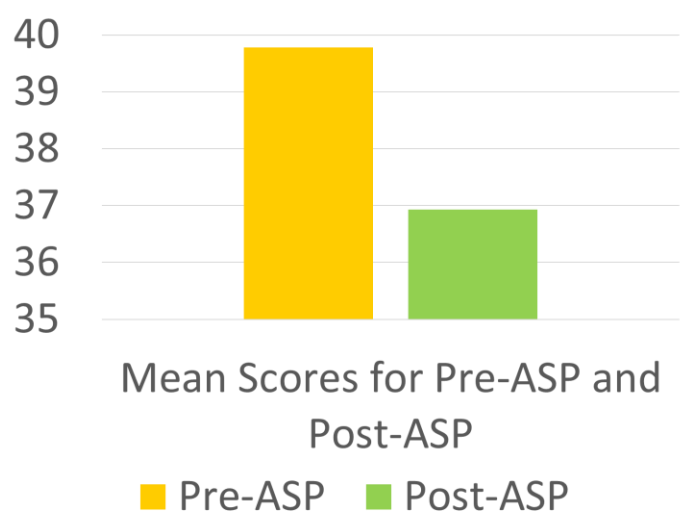
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Pre-ASP scale participants included 18 nurses. Group characteristics are similar in nature. The average age of the pre-ASP group was 39.78 (SD=12.38). The average years of nursing experience was 10.0 (SD=7.73). Post-ASP scale included 14 nurses. The average age of the post-ASP group was 36.93 (SD=12.99). The average years of nursing experience was 9.29 (SD=8.88).

Figure 4.2

Mean Pre-ASP and Mean Post-ASP Scores



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Changes in Outcomes

Outcomes measuring responses reflecting attitudes toward suicide prevention were analyzed utilizing the Wilcoxon signed rank test. The Wilcoxon signed rank test is a non-parametric statistical test that is used when comparing two random samples that come from the same population (Cronk, 2014). This test can be used to compare two sets of ordinal data that come from like participants. This test was chosen for analysis of this group due to the small number of participants. The Wilcoxon signed rank test performed to evaluate pre-ASP and post-ASP data elicited a Z score of 0.167 ($p > 0.05$).

Statistical Testing

The ASP is scored from 14 to 70 on a 5 point Likert scale. A lower score indicates a more positive attitude toward suicide prevention and a higher score indicates a more negative attitude. The mean score for the total pre-scale equaled 31.6 ($SD= 4.98$). The range of pre-scale scores were 21 to 38. The mean score for the post-scale equaled 29.9 ($SD= 4.84$). The range for post-scale scores were 18 to 39. There was a 1.7 total mean score decrease with the post-scale administration.

There were 4 questions that resulted in a higher percentage of nurses with a lower score indicating a more positive attitude toward suicide prevention (Table 4.1). Question 1 resulted in 12% of nurses who strongly disagreed with the pre-scale. There was a 20% increase to 32% of nurses who strongly disagreed to resenting being asked to do more about suicide. Question 3 resulted in 8% of nurses strongly disagreeing that making more funds available to the appropriate health services would make no difference to the suicide rate with the pre-scale. There was a 20% increase to 28% of nurses who strongly disagreed that making more funds available to the appropriate health services would make no difference to the suicide rate with the post-scale. Question 13 resulted in 4% of nurses who strongly disagreed that there is no way of knowing who is going to commit suicide with the pre-scale. There was a 8% increase to 12% of nurses who strongly disagreed that there is no way of knowing who is going to commit

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suicide with the post-scale. Question 14 resulted in 8% of nurses who believed that all of suicides are preventable with the pre-scale. There was a 12% increase to 20% of nurses who believed that all of suicides are preventable with the post-scale.

Table 4.2

The Attitudes toward Suicide Prevention Scale (ASP) Pre and Post Scale Results

		Pre-ASP % of nurses with the most positive attitude response*	Post-ASP % of nurses with the most positive attitude response*	Change from pre to post ASP scale
1.	I resent being asked to do more about suicide.	12%	32%	20% toward a more positive attitude
2.	Suicide prevention is not my responsibility.	28%	28%	0%, no change
3.	Making more funds available to the appropriate health services would make no difference to the suicide rate.	8%	28%	20% toward a more positive attitude
4.	Working with suicidal patients is rewarding.	0%	0%	0% no change
5.	If people are serious about committing suicide they don't tell anyone.	16%	8%	-8% toward a more negative attitude
6.	I feel defensive when people offer advice about suicide prevention.	20%	12%	-8% toward a more negative attitude
7.	It is easy for people not involved in clinical practice to make	4%	4%	0% no change

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	judgements about suicide prevention.			
8.	If a person survives a suicide attempt, then this was a ploy for attention.	24%	20%	-4% toward a more negative attitude
9.	People have the right to take their own lives.	24%	16%	-8% toward a more negative attitude
10.	Since unemployment and poverty are the main causes of suicide, there is little that an individual can do to prevent it.	16%	16%	0% no change
11.	I don't feel comfortable assessing someone for suicide risk.	12%	12%	0% no change
12.	Suicide prevention measures are a drain on resources, which would be more useful elsewhere.	20%	20%	0% no change
13.	There is no way of knowing who is going to commit suicide.	4%	12%	8% toward a more positive attitude
14.	What proportion of suicides do you consider preventable? (None-All)	8%	20%	12% toward a more positive attitude

*A score of 1 indicated the most positive attitude response for the question.

Significance

The PICOT question for this project was answered with the analysis of results. The PICOT question utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)? Based on the Wilcoxon signed rank test, pre-ASP and post-ASP scale nursing attitudes toward suicide prevention did not elicit a statistically significant difference ($Z = 0.167$, $p > 0.05$). Nursing attitudes were not statistically different following the

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implementation of a standardized screening tool in the ED. The significance and interpretation of these results from will be discussed in Chapter 5.

CHAPTER 5

DISCUSSION

The clinical question that motivated the development of this EBP project focused on seeking if nursing attitudes affect adolescent suicide risk identification in the ED. Based on the review of literature, the implementation of a standardized screening tool will improve completion rates of suicide screening and overall attitudes of nursing staff toward suicide prevention. The purpose of this EBP project was to evaluate ED nurses' attitudes toward suicide prevention following implementation of a new suicide risk tool for adolescents in the emergency department. The ASQ was implemented as best practice for adolescent suicide risk screening in the ED. A pre-test / post-test was utilized to assess how nursing attitudes changed following the implementation of the ASQ tool. This chapter will discuss the project findings, applicability of the EBP model and theoretical frameworks to the project, and implications for future practice changes that incorporate the findings of this EBP project.

Explanation of Findings

The PICOT question for this project was answered with the analysis of results. The PICOT question utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)? It was believed by the project manager that nursing attitudes would improve following the implementation of a standardized tool. Following implementation of the tool, data were collected to evaluate the hypothesis. Based on the Wilcoxon signed rank test, pre-ASP and post-ASP scale nursing attitudes toward suicide prevention did not elicit a statistically significant difference ($Z = 0.167, p > 0.05$). There were not statistically significant improvements in nursing attitudes following the implementation of a standardized screening tool in the ED.

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There were improved positive attitude changes identified in the results that warrant discussion. There were specific ASP scale items for nursing attitudes that changed toward a more positive attitude toward suicide prevention following the implementation of this tool. Related to changes in specific statements on the ASP, there were fewer nurses who agreed to resent being asked to do more about suicide. If nurses do not resent being asked to do more about suicide, any additional education and/or the permanent implementation of the ASQ standardized tool in the ED will likely succeed. Related to another change on the ASP, there were fewer nurses who believed that that making more funds available to the appropriate health services would make no difference to the suicide rate. With additional education and the implementation of a standardized tool, the realization that increased funding for suicide prevention is needed and can be successful in saving lives. Related to another change on the ASP, there were fewer nurses who believed that there is no way of knowing who is going to commit suicide. With the additional education and the implementation of a standardized tool, nursing staff beliefs for the ability to identify those with an increased suicide risk improved. This project specifically focused on ED nursing and for those nurses that now believe in the ability to identify an increased suicide risk, there may be additional adolescents who are identified and receive needed intervention. The ED opportunity to interact with adolescents who may not receive other healthcare can be greatly improved with nurses who believe that suicide risk and suicide ideation can be identified. Lastly, there was an increase in the belief that all suicides are preventable. If more nurses believe that all suicides are preventable there exists endless hope for the future of suicide prevention in the ED. Although each of these attitude changes were minimal, the change represented a trend toward a positive attitude toward suicide prevention with this EBP project.

The secondary findings from this project offer valuable information that can positively affect the crisis of adolescent suicide. Following the review of literature, it was determined that the implementation of a standardized tool would positively affect both the success of suicide risk assessment and the attitudes of nursing staff toward suicide risk assessment. The ASQ tool

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was implemented as best evidence practice for adolescent suicide risk assessment in the emergency department setting. Following a one month implementation evaluation data were collected to evaluate the number of positive suicide risk screens. There were seven adolescents out of 142 screened with the ASQ who presented to the ED and were not seeking mental health assistance that were identified with an increased suicide risk. This finding seems minimal, but if these results represents the future of ED risk assessment, there is potential for multiple adolescents annually to be identified as having an increased risk and opportunity to intervene to prevent additional adolescent death. Additionally, prior to the tool implementation, only those adolescents with a mental health or suicidal complaints received a suicide risk assessment with interventions for any positive screens. The new clinical practice change from this project includes screening all adolescents who present to the ED. This opportunity for the ED to identify and intervene with an adolescent at risk is valuable for the future of suicide prevention in the ED. This opportunity for assessment, intervention and suicide prevention represents success for the ASQ tool implementation in the ED.

Evaluation of Applicability of Theoretical and EBP Frameworks

Nursing theory is used in EBP as a framework to guide practice. Peplau's Theory of Interpersonal Relations was used as a framework for this project. A nursing model is used throughout the process of EBP and provides step by step processes to achieve success. The Iowa Model Revised was used at the model for this project.

Theoretical Framework

Peplau's Theory of Interpersonal Relations was used as a framework for this project. In this theory, Peplau emphasized that the scope of nursing is based on an interpersonal process that involves the interaction between the nurse and the patient (Peplau, 1952). Peplau stated that the nurse-patient relationship is the most basic human connection and is essential in providing nursing care. "The way in which the nurse produces the effects of her teaching or of the application of a technical procedure has a good deal to do with the interaction between nurse and patient (Peplau, 1952, p. 274)." The goal of Peplau's theory is to assist patients to

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become aware of and to solve their problems that interfere with constructive living (Peplau, 1952).

This theory was applicable as a framework for this project which sought to evaluate nursing attitudes toward suicide prevention to improve adolescent suicide risk assessment in the emergency department (ED). The attitude of the ED nurse reflects this basic human connection and can positively or negatively affect the results of the suicide risk assessment tool. In this theory, the purpose of nursing is to help others in identifying their difficulties, namely increased suicide risk. The interpersonal processes from Peplau's theory are important for the ED nurse providing care to all adolescents seeking treatment. These interpersonal processes are identified in this theory and include the phases of the nurse-patient interaction.

In the orientation phase, an adolescent seeks medical or psychiatric care in the emergency department. Introductions are made by the triage nurse as the adolescent enters the front emergency department entrance or by the assigned nurse who meets the adolescent on arrival directly into the department through the ambulance entrance. As the admission process begins, the identification of increased suicide risk is initiated. Peplau's theory is represented as the nurse-patient relationship begins. A positive attitude of the ED nurse is imperative for successful suicide risk assessment to facilitate obtaining candid results. The nurse offers a safe environment for the adolescent to be transparent and honest regarding the answers to the assessment screening. An improved nursing attitude toward suicide prevention as previously discussed offered opportunity for adolescents to feel safe with this initial nurse-patient interaction. A strength of this theory throughout this project is the importance of the interpersonal relationship between the nurse and adolescent to give ownership to the nurses to assess suicide risk as this relationship is developed.

In the ED setting, the implementation of suicide risk assessment was included in the working phase of Peplau's theory. The assessment questions are asked by the nurse and responses are documented. Those identified as having an increased risk received additional assistance through the working phase of the relationship in which the roles of the nurse include notifying the provider of increased risk findings, implementing safety measures as needed,

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communicating plans of action throughout the evaluation, or answering questions between patient and provider. Peplau's theory is used as nursing assists the adolescent to become aware of any existing suicide risk through the ASQ risk assessment. Additionally, the nurse assists the adolescent with and increased risk to become aware of this risk and to accept intervention to address this potential problem.

In addition to the implemented risk assessment tool, Peplau's theory was utilized as a guide for this project to evaluate ED nursing attitudes toward suicide prevention. This theory stresses the importance of nurses' ability to understand their own behavior to help others identify perceived difficulties (Peplau, 1952). Specifically, the ASP screening of nursing attitudes directed the nurse to evaluate his/her own beliefs toward suicide prevention. As each nurse evaluated personal beliefs and incorporated a change in practice that improved suicide risk assessment, self-reflection occurred. The activity of self-reflection regarding personal beliefs of suicide prevention will affect the nurse-client relationship. Personal beliefs affect the attitude of the nurse as the risk assessment is completed. The strength with this theory also includes the evaluation of personal beliefs toward suicide prevention brought on by the completion of the ASP and the importance of understanding that these beliefs affect the overall interpersonal relationship with each adolescent as they are screened for suicide risk.

This theory also emphasizes the importance of communication and interviewing for nursing practice and that nurse-patient interactions promote growth for both the patient and the nurse (Peplau, 1952). The process of suicide risk assessment requires effective communication skills. Although the tool is written within the EMR, the tone of voice and manner of questioning are communication skills that can affect the success of the tool. Effective communication and interviewing can lead to improved nurse-patient relationships and personal growth for both the patient and the nurse. The opportunity exists within this theory to expand on communication skills education and training for ED nurses.

EBP Framework

The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care was chosen for this project (Buckwalter et al., 2015). The Iowa Model has proven to

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support the infusion of evidence into practice. This model was chosen specifically for this project as it guides clinical decision making and EBP implementation from both the practitioner and organizational perspectives. Including support from both the practitioners and the organization will increase the probability of success.

The first step of the Iowa Model Revised begins with identifying a triggering issue or opportunity (Buckwalter et al., 2015). Nationally, the crisis of adolescent suicide is identified with statistical data available from multiple organizations including the CDC. These data are available online and are updated annually. Locally, the crisis of adolescent suicide is openly discussed among the ED nursing following several recent area adolescent deaths. The impact of adolescent death is greater when a family member or friend of the deceased is known by many in a rural community area.

The second step is to state the question or purpose (Buckwalter et al., 2015). The purpose of this evidence based project is to evaluate ED nurses' attitudes toward suicide risk assessment following the implementation of a new suicide risk tool for adolescents in the ED. The PICOT question utilized for this project was for ED nursing staff (P), will the implementation of a standardized screening tool that improves identification of increased suicide risk (I) as compared to the current practice (C) improve nurses' attitudes toward assessing suicide risk in the ED (O) over a one-month period (T)? The question remained throughout the project to guide implementation and evaluation.

The third step in the model is to determine if the topic is a priority (Buckwalter et al., 2015). TJC issued a Sentinel Event alert urging a safety recommendation to evaluate all patients for suicide risk (TJC, 2010). This alert makes this topic a priority for administration within the clinical setting. Following the implementation of an educational offering to the staff, the emphasis on the crisis of adolescent suicide risk and the implementation of a new suicide risk assessment tool made the topic a priority for ED nursing staff. This step is a strength for the model with this project which was implemented at a time when both administration and clinical staff supported the need for evaluation and change in clinical practice.

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The fourth step in the model is the development of a team (Buckwalter et al., 2015). For this EBP project, the team consisted of a project manager doctoral nursing practice student, a project facilitator emergency department director, a project mentor DNP professor, and emergency department registered nurses who will implement the tool. This team remained consistent throughout the project. Additionally, an ED tech was utilized to provide EMR knowledge and information technology support to the project manager.

The fifth step in the model was to assemble, appraise, and synthesize the body of evidence (Buckwalter et al., 2015). This process involved seeking the best evidence to improve suicide risk assessment for adolescents in the ED. The results were then synthesized to evaluate if there was sufficient evidence to initiate a change. This is the sixth step in the Iowa Model Revised (Buckwalter et al., 2015). Findings of the literature search included the implementation of a rapid screening tool to improve nursing attitudes toward suicide prevention in the ED. The synthesized body of evidence supported the implementation of the ASQ screening to into the ED admission process.

The seventh step in the Iowa Model Revised includes designing a practice change (Buckwalter et al., 2015). The practice change included the implementation of the ASQ screening tool into the EMR for all adolescents seeking treatment in the ED. The practice change was designed and the steps for implementation were followed. The eighth step includes determining if the change is appropriate for adoption into practice (Buckwalter et al., 2015). If it is not determined to be an appropriate change, a feedback loop exists in the model to consider alternatives and redesign the project. There were slight changes with wording of the ASQ that were adjusted within the specific limitation of the EMR system. This feedback loop was completed by the project manager and the facility information technology nurse. The goal of this EBP project is to improve identification of adolescents with increased suicide risk and with this process improvement change, nursing attitudes toward suicide prevention will improve leading to permanent practice improvement. The plan for this project was for a sustained practice change to meet the Joint Commission guidelines and to improve the adolescent health of the community.

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The ninth step involves the integration of the practice change into a sustained practice (Buckwalter et al., 2015). Steps for sustaining a practice change include identifying and engaging key personnel, implementing a hardware change into the system, monitoring key indicators, and reinfusing the change as needed (Buckwalter et al., 2015). Following a one month implementation of the ASQ screening tool, results were evaluated. These results were discussed with the ED nursing staff. The positive identification of seven adolescents who were not seeking mental health care was emphasized to the staff because of ED nursing efforts while implementing this tool. The results solidified an understanding of practice change necessity. The ASQ tool continues to be utilized in the ED following the completion of the EBP project.

The tenth step includes the dissemination of the results (Buckwalter et al., 2015). An overall comparison of pre-test and post-test scores on the ASP screen of ED nurses showed a lower score indicating a more positive attitude. This change was not statistically significant (Wilcoxon Rank, $Z = 0.167$, $p > 0.05$), however the results were shared with the ED staff, the ED administration, the facility educators, and through the ValpoScholar publication of this project.

Strengths and Limitations of the EBP Project

As the project was evaluated, strengths and limitations were identified and adjustments were made as needed. The process of evaluation was included in each step.

Strengths

One strength of this project included the simple instructions for the ASP scale. The ASP can collect information on the attitudes toward suicide prevention in front-line health professionals. It can be quickly completed and could be used to identify nurses needs and specific areas for improvement. Nursing staff could complete the scale without the requirement of lengthy instructions or explanations. There were no nursing staff who refused to participate in the completion of the ASP scale for this project.

Another strength of this project included the support of the project site facilitator. There was an administrative need to change the current risk assessment process as indicated by TJC guidelines (TJC, 2015). Administrative support is vital to the success of any practice change. This administrative support is an important step in the Iowa Model for EBP.

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Limitations

The major limitation was the small sample size (n=25 nurses). The sample size was limited to convenience sample of fulltime emergency department nurses at the chosen site. Additionally, although the staff training was mandatory, there were several nurses who did not attend the training and missed the opportunity to participate in the ASP screen.

A second limitation included a concurrent undergraduate nursing project that focused on adult suicide screening. These two concurrent projects may have affected nursing attitudes positively by providing additional education and emphasis on the suicide crisis, or negatively providing too many changes within a limited amount of time. This limitation could have been monitored with improved communication from the project manager with the project facilitator.

Implications for the Future

At the completion of this project, the evaluation should reflect a discussion of results. These results although not statistically significant offer implications for the future.

Practice

TJC issued a Sentinel Event alert (NPSG 15.01.01) urging the evaluation of all patients for suicide risk (TJC, 2015). This practice recommendation sets a standard for health care facilities. The ED is motivated to perform at the highest standard in order to obtain high reimbursement and outstanding recommendations and referrals. Clinical practice can be improved with the permanent implementation of the ASQ screening tool. Clinical practice aimed at maintaining the highest standard of care is a positive motivator for nursing staff who seek advanced performance. As ED nurses perform at the highest level of standard of care, positive attitudes prevail. The ASP tool evaluates nursing attitudes toward suicide prevention and can be used to identify areas of poorer attitudes or specific needs that warrant addressing. The APN can capitalize on the implementation of the new screening tool and include any positive suicide risk screens to further evaluate the risk and need for additional intervention.

Theory

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Peplau's theory emphasized the nurse client relationship as the foundation of nursing practice. This theory application helped in providing comprehensive care to the client. It can continue to be utilized as a framework for adolescents seeking care in the ED. The nurse-patient relationship includes more than technical interventions. Adolescents are more likely to reveal an increased suicide risk in the presence of a safe nurse-patient relationship that is centered on good communication as emphasized in the theory of interpersonal relations.

Research

The results of this project were not statistically significant to reveal an improved nursing attitude following the implementation of the ASQ tool. The framework of this project could be utilized in additional studies that include a larger body of participants. Additional research of nursing attitudes toward suicide prevention is needed and can be used to identify staff needs for education and additional training. Data can be collected and evaluated following the implementation of additional educational opportunities or suicide prevention measures.

Education

Continuing education is vital to clinical practice and maintaining a standard of care. Adolescent suicide rates are increasing at an alarming rate. Education highlights this crisis and supports the need for risk assessment and practice changes including the implementation of the ASQ risk assessment tool. Follow-up with data supporting the change should be included with any educational opportunity. Because ED nurses are not specifically trained in mental health, any education regarding care of the suicidal adolescent or conducting a suicide risk assessment is valuable to a population of nurses who are trained to focus on technical life saving assessment and intervention.

Conclusion

The Joint Commission seeks to improve health care for the public. National patient safety goals are issued by TJC to identify specific areas of concern for patient safety. TJC issued a Sentinel Event alert urging the evaluation of all patients for suicide risk (TJC, 2015). Adolescent suicide rates have increased and it is now the second leading cause of death for adolescents (CDC, 2015). The ED visit provides an opportunity to initiate the suicide risk

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assessment and screening when the adolescent presents there for medical care. The ED triage is where the first nurse-patient interaction happens. It is vital for the nurse to begin the interaction with a positive attitude to maximize the opportunity to identify those adolescents with an increased suicide risk. A standardized risk assessment tool offers a consistent method for the ED nurse to assess risk. Any inconsistency in suicide risk assessment can lead to delay in obtaining needed care, or possible adverse events including a suicide attempt or completed suicide. The ASQ tool can be utilized in the ED to assess suicide risk of adolescents. With the implementation of a standardized tool, ED nurses are more likely to complete the suicide risk assessment. The ability to improve clinical practice and see results of an implemented change positively affects the nurses' attitude and will solidify the practice habit to improve suicide risk assessment in the ED.

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BIOGRAPHICAL MATERIAL**Julie A. Simpson**

Julie completed her bachelors of science in nursing in 1989. She spent many years in an emergency department performing duties as a staff nurse, preceptor, and educator. In 2004, she became a flight nurse and has worked full time as a flight nurse for the past 13 years. She is an instructor for the American Heart Association and the National Association of Emergency Medical Technicians. She instructs multiple classes for nurses and emergency medical personnel including Advanced Cardiac Life Support, Pediatric Advanced Life Support, Pre-Hospital Trauma Life Support, and Advanced Medical Life Support. The rewarding career as a flight nurse has contributed to the reasons that motivated Julie to pursue an advanced nursing degree beginning in 2012. Julie completed her Master's in Science of Nursing Education from Valparaiso University in 2015. She is currently enrolled in the DNP program at Valparaiso University and plans to graduate in May of 2017. She is a member of the American Nurses Association (ANA), Coalition of Advanced Practice Nurses Incorporated (CAPNI), and the American Association of Nurse Practitioners (AANP). Julie serves as a board member of the Southwest Volunteer Fire Department in her home community. Following the personal experience of adolescent suicide with the death of her son's best friend at the age of fifteen, she became motivated to utilize her professional expertise to implement this project that addresses adolescent suicide in the emergency department at her local hospital.

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ACRONYM LIST

ASN: Associate of Science in Nursing

ASP: Attitudes Toward Suicide Prevention

ASQ: Ask Suicide-Screening Questionnaire

BSN: Bachelor of Science in Nursing

CDC: Centers for Disease Control

DNP: Doctorate of Nursing Practice

EBP: Evidence-Based Practice

ED: Emergency Department

EMR: Electronic Medical Record

GCP: Good Clinical Practice

LPN: Licensed Practical Nurse

MSN: Master of Science in Nursing

NPSG: National Patient Safety Guidelines

RN: Registered Nurse

RSQ: Risk of Suicide Questionnaire

SIQ: Suicidal Ideation Questionnaire

TJC: The Joint Commission

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Appendix A Summary of Appraised Literature

Citation	Purpose	Sample	Design	Measurement	Results	LOE / Rating
Ballard, E. D., Stanley, I. H., Horowitz, L. M., Pao, M., Cannon, E. A., & Bridge, J. A. (2013). Asking Youth Questions About Suicide Risk in the Pediatric Emergency Department: Results From a Qualitative Analysis of Patient Opinions. <i>Clinical Pediatric Emergency Medicine, 14</i> (1), 20–27. Retrieved from: http://doi.org/10.1016/j.cpem.2013.01.001	This study examined adolescent opinions on screening for suicide risk in the ED.	A convenience sample of 165 youth ages 10 to 21 (95 females and 70) males who presented to the ED for psychiatric and non-psychiatric complaints were included in the study.	Qualitative study using a voluntary survey of questions prior to the administration of a suicide risk assessment.	Qualitative analysis included NVivo9.2 software used to evaluate the data of the answered questions. Open coding procedures were used to identify themes from the data.	Understanding patient opinions, both in support of and in opposition of, can affect practice implementation. Ninety percent of youth surveyed supported suicide risk screening.	VI / High

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<p>Betz, M. E., Arias, S. A., Miller, M., Barber, C., Espinola, J. A., Sullivan, A. F., ... Boudreaux, E. D. (2015). Change in emergency department providers' beliefs and practices after use of new protocols for suicidal patients. <i>Psychiatric Services, 66</i>(6), 625-631. doi: 10.1176/appi.ps.201400244</p>	<p>This study examined attitudes and practices of providers related to suicide risk assessment in the ED. The purpose of the quasi-experimental study was to evaluate changes in knowledge, behavior, and attitudes following implementation of universal screening tool for suicide risk in the emergency department.</p>	<p>A convenience sample of 1,289 providers including ED physicians and registered nurses from eight EDs.</p>	<p>A quasi-experimental design was used as this voluntary survey was conducted at three points of the study including baseline, following implementation of a universal suicide screening tool, and following implementation of suicide protocol including prevention resources and intervention suicide risk screening tool.</p>	<p>A 4 or 5 point Likert scale was used to obtain The results were analyzed using Pearson chi square and Fisher exact test as indicated. All p values were two-tailed, with $p < .05$ considered statistically significant results.</p>	<p>Results included the greatest change in outcomes following the implementation of a universal screening tool and protocol. Nurses screening patients for suicidal risk reported 36% completion at baseline phase one, 93% completion following implementation of a screening tool phase 2, and 95% following implementation of a protocol with screening tool and resources phase 3 ($p < .001$ for comparisons between phase 1, 2, and 3 respectively). The conclusions support that implementing a universal screening tool will increase identification of patients in the ED with increased suicidal risk.</p>	<p>III / High</p>
<p>Boudreaux, E. D., Camargo, C. A., Arias, S. A., Sullivan, A. F., Allen, M. H., Goldstein, A. B....</p>	<p>The purpose of this study was to evaluate if the use of a universal screening tool</p>	<p>Three thousand one hundred and one of those with identified increased risk</p>	<p>A three phase time series design was used including chart reviews and direct</p>	<p>Analyses were performed using Stata, version 13.1. Documented screenings</p>	<p>The implementation of a universal screening tool in the ED led to an increase in use by providers and an increase in detection of</p>	<p>III / High</p>

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<p>Miller, I. W. (2016). Improving suicide risk screening and detection in the emergency department. <i>American Journal of Preventive Medicine</i>, 50(4), 445-453. doi: 10.1016/j.amepre.2015.09.029</p>	<p>(ED-SAFE) improved suicidal risk detection in the ED.</p>	<p>participated in patient interviews.</p>	<p>patient interviews.</p>	<p>increased from 26% to 84%.</p>	<p>increased suicidal risk in the ED. Conclusions from this study included that increasing documented suicide risk screening rates in the general ED population was achieved using a simple risk screen. Increasing screening led to nearly twice as many patients identified as having suicide risk. This "landmark finding" as identified by the researchers, recommends universal screening to improve identification of suicide risk and create opportunity for interventions to prevent suicide completion.</p>	
<p>Emergency Nurses Association (ENA) Resource Development Committee. (2012). Clinical practice guideline: Suicide risk assessment. Des</p>	<p>The purpose of this guideline is to evaluate risk assessment tools and predictors that are effective in screening for self-harm or suicidal</p>	<p>This guideline included 53 documents of evidence.</p>	<p>This guideline is a review of published meta-analysis and systematic review of evidence.</p>	<p>Final documents were reviewed by the Institute for Emergency Nursing Research Advisory Council for overall validity.</p>	<p>Recommendations include that suicide screening tools should be used as part of the assessment process for ED patients. Screening for risk of suicide in pediatric patients over the age of 10 is appropriate,</p>	<p>I / High</p>

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Plains, IL. Emergency Nurses Association.	ideation during initial assessment for patients across the lifespan in the ED.				feasible, and practical in the ED.	
Folse, V. N., Eich, K. N., Hall, A. M., & Ruppman, J. B. (2006). Detecting suicide risk in adolescents and adults in the emergency department: A pilot study. <i>Journal of Psychosocial Nursing, 44</i> , (3). 22-29.	The purpose of this study was to evaluate the reliability and validity of the 4 item Risk of Suicide (RSQ) Questionnaire in both adolescents and adults, regardless of chief complaint in the ED.	A convenience sample of 104 adolescents (n=39) and adults (n=65).	Face to face interviews were conducted using the 4-item RSQ.	Cronbach's alpha coefficients were used to calculate reliability. 2 items were found to have a high degree of reliability. Pearson's correlation coefficients were calculated with these two items to establish validity.	ED nurses can implement rapid assessment of suicide risk can using the 4 item RSQ. The 2 items that displayed validity should be further investigated.	VI / High
Folse, V. N. & Hahn, R. L. (2009). Suicide risk screening in an emergency department. Engaging staff nurses in continued testing of a brief instrument. <i>Clinical</i>	The purpose of this study was to continue to evaluate the reliability and validity of the 4 item Risk of Suicide (RSQ) Questionnaire in both adolescents	A convenience sample of 202 patients including adolescents (n=59) and adults (n=143) seeking treatment in an ED.	Face to face implementation of the 4 item RSQ by ED RNs.	SPSS was used for statistical analysis. Cronbach's alpha was used to identify internal consistency. Suboptimal levels of internal consistency were	The RSQ is a screening tool that is appropriate for use in the ED and can be rapidly administered by nurses. Results support universal screening for increased suicide risk as part of the ED admission process.	VI / High

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<p><i>Nursing Research</i>, 18(3), 253-271. doi: 10.1177/10547738 09335296</p>	<p>and adults, regardless of chief complaint in the ED.</p>			<p>shown with all participants ($\alpha=0.46$).</p>		
<p>Horowitz, L. M., Wang, P. S., Koocher, G. P., Burr, B. H., Smith, M. F., Klavon, S., & Cleary, P. D. (2001). Detecting suicide risk in a pediatric emergency department: Development of a brief screening tool. <i>Pediatrics</i>, 107(5). http://dx.doi.org/10.1542/peds.107.5.1133</p>	<p>The purpose of this study was to develop a screening tool applicable for the ED staff to rapidly and accurately evaluate suicidal risk in children and adolescents.</p>	<p>144 child and adolescent participants; 66 were male and 78 were female. The mean age was 13.6 years.</p>	<p>The design of this survey was a cross sectional survey. Two risk screening scales (14 item Risk of Suicide Questionnaire and 30 item Suicide Ideation Questionnaire) were administered to participants.</p>	<p>Analysis of the results were evaluated using the logistic procedure of SAS Version 6.12. To find the optimal combination of RSQ items for inclusion in a brief screen, sensitivity, specificity, positive and negative predictive value, and c statistics were calculated.</p>	<p>These results led to the development of a 4-item Risk of Suicide Questionnaire (RSQ) tool.</p>	<p>VI / High</p>
<p>Horowitz, L., Ballard, E., Teach, S. J., Bosk, A., Rosenstein, D. L., Joshi, P., Pao, M. (2010). Feasibility of screening patients with</p>	<p>This study examined the feasibility of performing a suicide risk assessment of adolescents in the emergency</p>	<p>A convenience sample of 156 youth aged 10-21 were included in this cross-sectional study.</p>	<p>This study design included a prospective cross-sectional study.</p>	<p>Quantitative analysis found a prevalence rate for increased suicide risk of 10% for pediatric non-psychiatric population.</p>	<p>Overall findings include that asking pediatric patients directly about suicidal thoughts and behaviors is valuable and should be included in the emergency department setting. The results</p>	<p>VI / High</p>

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nonpsychiatric complaints for suicide risk in a pediatric emergency department: A good time to talk? <i>Pediatric Emergency Care</i> , 26(11), 787-792.	department who present with non-psychiatric complaints.	Inclusion criteria included ages 10-21 with both psychiatric and non-psychiatric complaints.		Qualitative analysis evaluated acceptability, prevalence, practicality, and patient opinion. SPSS was used to analyze data.	further recommended utilization of a brief screening tool in the emergency department setting to improve identification of adolescents with increased suicide risk.	
Horowitz, L. M., Bridge, J. A., Teach, S. J., Ballard, E., Klima, J., Rosenstein, D. L.,...Pao, M. (2012). Ask suicide-screening questions (ASQ). <i>Archives of Pediatric and Adolescent Medicine</i> , 166(12), 1170-1176. doi: 10.1001/archpediatrics.2012.1276	order to develop a brief screening instrument to be utilized in the ED for those admitted for medical/surgical complaints.	A convenience sample of 524 adolescents presenting to three urban EDs with either medical/surgical or psychiatric complaints was included in the study.	A qualitative cross sectional study	Statistical analysis to establish validity between the two questionnaires was conducted using the chance-correlated kappa statistic (k). Regression models were utilized to evaluate all possible combinations of questions.	Four questions were found to be prevalent in the risk factor assessment and the SIQ in those that were evaluated as having increased risk for suicide. Those four questions included 1) current thoughts of being better off dead, 2) current wish to die, 3) current suicidal ideation, and 4) past suicide attempt. These results led to the development of a 4-item Ask Suicide-Screening Questions (ASQ) tool.	VI / High
King, C. A., O'Mara, R. M., Hayward, C. N., & Cunningham, R.	This study examined the validity and utility of an	This study included a convenience sample of 298	This study is a cross-sectional study. Multiple screening tools	Results were analyzed in using SPSS. Chi-square tests	The suicide risk screen showed evidence of validity and can be utilized to identify	VI / High

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<p>M. (2009). Adolescent suicide risk screening in the emergency department. <i>Journal of the Society for Academic Emergency Medicine</i>, 16 (11), 1234-1241. doi: 10.1111/j.1553-2712.2009.00500.x</p>	<p>adolescent suicide risk screen for use in general medical EDs. Additionally, this study examined the prevalence of positive suicide risk screens for female and male adolescents.</p>	<p>adolescents seeking emergency services for both psychiatric and non-psychiatric complaints.</p>	<p>including the Suicide Ideation Questionnaire were utilized to evaluate increased suicide risk and concurrent depression, alcohol abuse, and impulsivity.</p>	<p>and t-tests were used for descriptive statistics comparisons. Alpha coefficients were calculated to determine internal consistency.</p>	<p>adolescents with increased risk who present to the ED for non-psychiatric medical complaints. Additionally, some adolescents who are identified with an increased suicide risk may have an increased risk for depression, alcohol abuse, and impulsivity.</p>	
<p>Petrik, M. L., Gutierrez, P. M., Berlin, J. S., & Saunders, S. M. (2015). Barriers and facilitators of suicide risk assessment in emergency departments: a qualitative study of provider perspectives. <i>General Hospital Psychiatry</i>, 37, 581-586. doi:</p>	<p>This study examined barriers and facilitators to suicide risk assessment in the emergency department (ED) in order to find best practices for ED suicide risk assessment.</p>	<p>A convenient sample of 92 ED providers including physicians (n=9), residents (n=9), physician assistants (n=6), registered nurses (n=64) and social workers (n=4) from two hospital systems.</p>	<p>This descriptive qualitative study utilized an online survey.</p>	<p>Results were analyzed using an inductive thematic analysis. Conclusions yielded six themes that impact suicide risk assessment : time, privacy, collaboration, screening protocol, patient engagement and provider approach.</p>	<p>Recommendations for improving practice include considering time and privacy, identifying available mental health referrals, and implementing a standard protocol for nurses or providers to obtain the risk assessment.</p>	<p>VI / High</p>

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10.1016/j.genhosppsych.2015.06.018						
<p>Working Group of the Clinical Practice Guideline for the Prevention and Treatment. (2012). Clinical practice guideline for the prevention and treatment of suicidal behavior. Ministry of Health and Social Policy. Madrid, Spain. Galician Health Technology Assessment Agency.</p>	<p>This guideline is created to describe interventions and practices related to adolescents and adults who are at risk for suicidal behavior.</p>	<p>Handsearch of public literature and searches of electronic databases provides documents used for this guideline.</p>	<p>This guideline is a review of published meta-analysis and systematic review of evidence.</p>	<p>Internal and External peer review were used as guideline validation.</p>	<p>A brief version of suicide risk questionnaire is recommended for use by emergency department triage staff. The assessment of patients with suicidal behavior should be conducted in an atmosphere of privacy, confidentiality and respect. In the emergency department, it is recommended to conduct suicide risks screening with the presence of risk factors or even if seeking care for other reasons.</p>	<p>I / High</p>