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Intimate Partner Violence Screening in the Emergency Department

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in partial fulfillment of the requirements for the degree

Doctor of Nursing Practice with an emphasis in Psychiatric-Mental Health

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Abstract

Problem: Intimate partner violence [IPV] is a public health concern that affects one in three women worldwide. IPV can be addressed through identification and early intervention with minimal risk to the patient. The emergency department is an important setting for screening given the frequency with which people who experience abuse may present with IPV-related injuries and other related concerns (depression, suicidality, etc.). Successfully implementing a validated tool for screening and providing early access to resources and referrals may help to mitigate the long-term negative impacts of IPV. The need for increased staff education was a major barrier to screening for IPV.

Methods: This quality improvement project was conducted utilizing a cohort design via retrospective chart review following the PDSA model. The Relationship Health and Safety Screen (RHSS) was to be administered to females aged 18 years and older presenting to the emergency department during the period of this quality improvement project. Data collected from patients included the number of screenings administered, and the number of positive and negative screenings. Further, staff were provided with education regarding IPV and the RHSS and were given pre-, post-, and post-implementation surveys to measure their knowledge, confidence, and skills over time.

Results: A total of 9 screenings were performed on women post implementation of the RHSS. From the survey results there were statistically significant improvements in perceived knowledge and perceived skill $F(1.426, 19.967) = 10.940, p < .002$ and $F(1.316, 18.425) = 15.834, p < .001$ respectively, though clinically all scores improved from pre-test to post-implementation.

Implications for Practice: Universal screening for IPV using the RHSS in Emergency Department settings could provide early access to resources and referrals and mitigate long term negative impacts of IPV.

Intimate Partner Violence Screening in the Emergency Department

Intimate partner violence (IPV) is a major public health concern around the world. Globally, it is estimated that 33-45% of women worldwide will experience either physical and/or sexual intimate partner violence in their lifetime (DiFranco et al., 2020; World Health Organization, 2021). IPV refers to behavior within an intimate relationship that causes physical, emotional, or sexual harm to those within the relationship and may include controlling behaviors, such as isolation, stalking, and limiting access to finances (World Health Organization, 2012). IPV has been linked to mental illnesses such as depression, anxiety, PTSD, suicidal ideation, and low self-esteem (Dokkedahl et al., 2022). One way this global health problem can be addressed is through identification and early intervention. The emergency department is an important setting for screening due to the frequency with which people who experience intimate partner violence related injuries and other related concerns such as depression and suicidality (Miller et al., 2021). Successfully implementing a validated tool for screening and providing early access to resources and referrals may help to mitigate the long-term negative impacts of IPV (Heyman et al., 2021).

Background

In the United States, intimate partner violence is the primary cause of injury for women aged 16-45 years (Karnitschnig et al., 2020). with 36% experiencing IPV in the form of sexual or physical violence or stalking (Smith et al., 2018). Over 47% of women reported sexual, physical and/or stalking IPV in their lifetime (Leemis et al., 2022) and nearly half of all women in the U.S. report having experienced psychological aggression, such as humiliation, coercive control and entrapment by an intimate partner (Smith et al., 2018; Leemis et al., 2022). According to the most recent National Intimate Partner and Sexual Violence Survey (Leemis et al., 2022), 42% of women in the U.S. reported experiencing physical violence in their lifetime, and over 32% reported severe physical violence. Furthermore, severe physical violence by an intimate partner was reported in over 32% of women in the most recent publication of The National Intimate Partner and Sexual Violence survey which has increased from 25% from the last publication

(Leemis et al., 2022; Smith et al., 2018). Nearly 3 million women reported severe physical IPV within the 12 months prior to the publication of The National Intimate Partner and Sexual Violence Survey (Smith et al., 2018). These numbers are trending in the wrong direction, despite a push from several large health organizations promoting women's health and decreasing violence against women as goals.

Aside from physical ramifications victims of intimate partner violence also experience poorer sexual, reproductive and mental health (DiFranco et al., 2020). Victims with a history of IPV have an increased incidence of chronic pain, memory loss, headaches, chronic pelvic pain, back pain, abdominal pain and other gastrointestinal disorders (DiFranco et al., 2020), depression, low birth weight infants (Spangaro et al., 2020), substance abuse, and attempted or completed suicide (Karnitschnig et al. 2020). Also, chronic stress can result in changes to the amygdala and hippocampus which may lead to psychiatric disorders such as anxiety disorders and PTSD. Chronic stress can also lead to increased risk of infection, cardiovascular disease, and insulin resistance (DiFranco et al., 2020).

IPV is also associated with increased personal and societal costs. Three quarters of women survivors of IPV report missing school and/or work, and requiring health care services (Noilon et al., 2017). There is also a positive association between mental illnesses such as anxiety, depression, PTSD and other forms of severe mental illness and exposure to intimate partner violence. Women exposed to IPV experience depression and anxiety at double the rate, and three times the rate of severe mental illness compared to women not exposed (Chandan et al., 2020). All forms of IPV are associated with higher health care utilization and costs due to the complex nature of treating the medical and mental health sequelae from IPV exposure (Heyman et al., 2022). One study estimates the lifetime cost of IPV was over \$100,000 dollars with a population economic burden of over \$3.5 trillion over victims' lifetimes (Peterson et al., 2018).

In addition to the extensive complications and comorbidities women exposed to intimate partner violence might face, the risk for mortality is also increased. In 2019 roughly 40% of all

female homicide victims in the United States were killed by a current or former partner (Centers for Disease Control and Prevention, 2021). For women who present to an ED with IPV related concerns, approximately 33% are considered at high risk of dying from IPV and nearly one-half of those killed by a current or former partner had visited an ED for their injuries in the 2 years leading up to their death. Therefore, it is imperative to implement routine screening in the ED, which has the potential to contribute to better health outcomes in women. Intimate partner violence not only directly impacts its victims but also impacts their children.

Children witnessing intimate partner violence are also at risk for worse short- and long-term health outcomes. Witnessing intimate partner violence repeatedly has been shown to increase the risk for developing PTSD, anxiety disorders, emotional dysregulation, decreased school performance and impaired sleep (Karnitschnig et al., 2020). Additionally for pregnant women, IPV is associated with low birth weight, premature delivery and other consequences that could have long term ramifications for the health of the child (Withiel et al., 2019).

When compared with the general population women veterans are at increased risk for experiencing intimate partner violence in their lifetimes. Nearly 86% of the participants in a study of women veterans disclosed IPV during their lifetime, with over 60% reporting IPV since leaving the military (Dichter et al., 2015). Davin et al. (2022) reported that in a sample of over 400 female veterans more than half of all respondents had experienced a history of IPV in their lifetime, and of those over 60% reported intimate partner sexual assault during their lifetime. In another study conducted at a VA Medical Center women veterans surveyed reported they wanted to be asked about IPV, they are more likely to disclose IPV when asked and when women spoke to a provider about IPV they were over 2 times more likely to exit the relationship (Iverson et al., 2020).

The emergency department is an important setting for screening given the frequency with which people who experience abuse present with IPV-related physical injuries and other related concerns such as depression and suicidality (Miller et al., 2021). The emergency department may

also be the first and the only place where women experiencing IPV interact with the health care system (Dawson et al., 2019). Identifying individuals exposed to intimate partner violence is the first step to IPV intervention and safety planning and screening for IPV has been associated with moderate health improvements and has minimal risk to the patient. Women that spoke to a provider about IPV was over 2 times more likely to exit the relationship (Iverson et al., 2020). Furthermore, IPV screening is an important intervention in identifying women with IPV exposure because many individuals will report IPV when asked to, but not elicit that information spontaneously (Heyman et al., 2022). Multiple organizations recommend routine screening in a variety of patient care settings. While the World Health Organization doesn't recommend routine or universal screening in all health-care encounters, it does recommend screening for exposure to intimate partner violence when assessing conditions that may be related such as depression, anxiety, PTSD, suicidality, self-harm, chronic pain with unclear etiology, repeated health consultations with no clear diagnosis, and many other conditions (World Health Organization, 2013). The United States Preventative Services Task Force also released a recommendation for all women of reproductive age to receive routine IPV screening (United States Preventative Services Task Force [USPSTF], 2018). The Office of Disease Prevention and Health Promotion also included 'Reduce sexual or physical adolescent dating violence' as a goal in the Healthy People 2030 initiative (Office of Disease Prevention and Health Promotion [ODPHP], n.d.). Thus, to create better outcomes for women, screening in the ED for IPV is an important first step to IPV intervention.

The evidence-based practice framework chosen to guide the project is the Institute for Healthcare Improvement's (IHI) Model for Improvement. The Model for Improvement consists of two parts, three fundamental questions and a Plan-Do-Study-Act (PDSA) cycle to test changes. This model was selected because the framework is a tool for healthcare improvement that relies on collaborative and progressive tests of change to see what results in improvement (Institute for Healthcare Improvement [IHI], n.d.).

This study's primary purpose is to evaluate the impact of training on knowledge about IPV, confidence in implementing routine screening and their perception of their skills after training. The study's secondary purpose is to implement routine IPV screening and evaluate the number of referrals and resources provided to female patients aged 18 and older impacted by IPV at a midwestern Veteran's Affairs (VA) Hospital Emergency Department. The outcome measures regarding staff education include measuring levels of knowledge, confidence and skill related to IPV and demographic variables of staff in the ED both before and after the nursing education and three months after education is completed. Further outcome measures are the completion of the trauma-informed screening protocol during visits to the ED and the number of patients who received a referral to the IPV assistance program (IPVAP). The aim of this project is to implement routine IPV screening and screen at least 25% of women over the age of 18 years seen in a VA Emergency Department over a three-month period. The primary question for the study is, what is the impact of training on staffs' knowledge, skills and confidence in implementing routine screening of IPV? And the secondary study question is in women over the age of 18 years, treated in the Emergency Department what is the impact of including a computer prompt and universal screening using the Trauma-informed Screening Protocol on 1) the identification of IPV, and 2) if identified, the treatment and referral to additional resources?

Review of Literature

Three databases were searched – Pubmed, CINAHL, and Medline (EBSCO), using the following search terms and phrases: intimate partner violence, domestic violence, partner abuse, screening, assessment, emergency department, emergency room, with the use of Boolean operators AND and OR. Based on the key search terms and phrases, initial search results generated 28,279 articles. Inclusion criteria were studies published between 2017 to 2022, published in the English language, and the articles had to relate to IPV screening in an acute care setting. Exclusion criteria were those publications with a male IPV focus, not published in English, articles not related to IPV screening in an acute care setting and articles published before

2017. After the inclusion and exclusion criteria were applied, 60 publications were generated and ultimately 11 articles were selected for this literature review. Duplicates were eliminated and abstracts were read to determine if each article met criteria for inclusion.

A thorough review of the literature elicited the following themes: the need for increased education, confidence, staff bias. Assessment and routine IPV screening for women presenting to emergency departments has been identified as a need by the American College of Emergency Physicians (American College of Emergency Physicians, 2019).

One study reported that during their stay, women who visited the emergency department (ED) with injuries sustained from IPV had their physical injuries attended to but not their experiences of IPV (Olive, 2017). Across the literature this was attributed to a lack of practitioner education. Multiple studies reported staff members felt insufficiently trained to identify and respond to victims of IPV (Dawson et al., 2019; Hinsliff-Smith and McGarry, 2017; Tobias et al., 2019). Staff also reported that they didn't know how to ask felt they didn't know how appropriate address intimate partner violence with the patient and lack confidence and competence in screening (Karnitschnig et al., 2020; Withiel et al., 2019), and had difficulties in recognizing and raising the subject of IPV (Olive, 2017). The need for increased staff education was a major barrier to screening for IPV.

Despite there being limited literature on best methods for educating health care providers, some training curriculums do exist. The World Health Organization created a curriculum to provide health care providers with training and skills required to respond to intimate partner violence (Burns et al., 2022; WHO, 2019). The WHO recommends four objectives for IPV training including demonstrating general knowledge of IPV as a public health concern, demonstrate safe and supportive services for survivors, demonstration of clinical skills relevant victims of IPV and knowledge of resources available.

Other than lack of education and low levels of confidence in screening, other barriers were also identified to routine screening of IPV patients presenting to the ED. Additional barriers

to screening presented were lack of privacy (Spangaro et al., 2020), discomfort screening for IPV (Karnitschnig et al., 2020; Tobias et al., 2019), and perceived lack of time (Hinsliff-Smith and McGarry, 2017; Spangaro et al., 2020; Tobias et al., 2019). Hinsliff-Smith and McGarry (2017) stated that health care staff prejudices may also be a barrier to screening particularly, for repeat or frequent IPV survivors to the ED. Olive (2019) also concluded that myths and cultural attitudes regarding IPV lead to decreased awareness and screening for IPV among healthcare providers.

Several articles included interviews of staff members' perceptions of intimate partner violence screening. In some instances, emergency room clinicians seemed to doubt victims as evidenced by a lived experience study. The in-hospital practitioners in this study commonly prefixed accounts of violence with the term 'alleged', while the ambulance records attached to the same charts rarely applied the prefix alleged. Clinicians were less likely to document one-time events as acts of intimate partner violence.

In interviews examining recording practices more than one clinician normalized acts of violence that they perceived as a one-time event and were more likely to document the term 'domestic violence' if patients disclosed previous partner violence (Olive, 2019). Victims of IPV that reported to the ER in this study were randomly selected for interview and multiple individuals stated that they didn't receive any resources or referrals to specialists and had to return to the perpetrator of IPV. Ultimately, the cultural attitudes of staff led to delays in receiving appropriate referral services and safety planning. The idea that 'one-off' events are not IPV events that require intervention may also contribute to under-reporting of IPV because IPV patients are often repeat survivors but will often not disclose recurrent IPV (Hinsliff-Smith and McGarry, 2017).

Screening based on suspicion leads to underreporting of IPV prevalence and fails to identify many individuals exposed to IPV who need resources and safety planning and lowers screening rates (Olive, 2017; Hinsliff-Smith and McGarry 2017; Spangaro et al., 2020). Even when routine screening was the protocol, failure to know the policies, procedures and resources in

place for victims of IPV may lead to inadvertent practitioner-led screening practices, which leads to missed referrals to necessary resources for victims (Withiel et al., 2019). A systematic approach to screening with the use of a validated screening tool and comprehensive protocol is necessary to identify higher numbers of victims (Medel -Herrero et al., 2020; Spangaro et al., 2020; Tobias et al., 2019) especially when compared to provider led screening (Karnitschnig et al., 2020; Olive, 2017).

Identification is the first step to intervention and safety planning. Routine screening with validated tools ensures that people are screened for all forms of intimate partner violence. After providing education to nurses on performing IPV screening with a validated tool, the rates of positive IPV screens almost doubled in one study (Karnitschnig et al., 2020). The number of referrals to pre and post intervention services also doubled. There was also a substantial increase in positive IPV screens and referrals may indicate that IPV training advanced health care provider skills. Withiel et al., (2019), reported that women indicated that they weren't screened for financial or sexual abuse, neglect or coercive behaviors (threatening, controlling, or intimidating), which may also lead to underreporting and failure to provide resources and safety planning.

Nearly all studies in this literature review identified routine screening with a validated screening tool as a recommendation for care and future studies. Another study identified that IPV is scarcely recognized and it's necessary to implement screening protocols, universal or at the detection of warning signs such as traumatic injuries, somatic symptoms, and psychiatric symptoms such as anxiety and depression (DiFranco et al., 2020). More studies are needed on training and education to improve clinicians' knowledge of hospital policy on safety plans and to raise awareness of screening tools including standardized documentation and protocols for improved assessment (Dawson et al., 2019). Hansliff-Smith and McGarry (2017) also highlighted the need for additional studies on education as a fundamental aspect for managing IPV presentations.

Limitations were identified in each study but there were several common themes for limitations. Low screening rates were identified in multiple studies as limiting the power and generalizability of the conclusions (Karnitschig et al., 2020; Spangaro et al., 2020). The small number of staff and clients surveyed (Withiel et al., 2017), small sample sizes and high attrition rates and the lack of longitudinal studies limited the power of conclusions (An & Choi, 2017; Trabold et al., 2018). Dawson et al. (2019), reports that their study was potentially limited by its focus on women rather than on all individuals experiencing IPV.

Regarding the need for future research, the need for larger, more heterogenous samples that engage in research to engage and retain more participants was a common theme. Other needs identified for future research included research to address barriers to screening and outcomes from interventions (Spangaro et al., 2020), integrating pre/posttest on nurse and provider learning (Dawson et al., 2019; Karnitschnig et al., 2020) and the need for research on sustained and ongoing education with the ED staff (Hinsliff-Smith and McGarry, 2017).

The Institute for Healthcare Improvement's (IHI) Model for Improvement is a common framework used for testing change. The Model of Improvement is well-suited to this project due to the need for ongoing Plan-Do-Study-Act (PDSA) cycles due to the novelty of this project at the facility chosen for implementation. Intimate partner violence is a continuous problem that makes this clinical problem ideal for this evidence-based model for continuous improvement to guide practice change.

In summary, intimate partner violence is a major health concern for women world-wide. It is responsible for significant morbidity and mortality and is associated with significant physical, psychological, and financial implications for people around the world. Secondary IPV intervention can help to mitigate some of those implications and the ideal place to institute a routine screening protocol with a validated screening tool is in the emergency department. The implementation of screening and referral to tertiary IPV interventions such as resources, safety

planning, advocacy guided interventions, and different therapeutic modalities have the potential to improve the health and well-being of patients and their progeny.

Method

Design

This quality improvement project was conducted utilizing a cohort design following the PDSA model. A retrospective chart review was conducted to identify the number of female veterans aged 18 years and older presenting to the emergency department from February 4th to March 21st, 2023 for pre-implementation data, from March 22nd to March 29th, 2023 for implementation period data, and from March 30th to May 13th, 2023 for post-implementation data. The IPVAP coordinator was also consulted to review the number of patients who did not consent to documentation but did consent to screening. The data was analyzed for the outcome measures provided in the analysis section.

Setting

This project took place at the St. Louis VA Health Care System – John Cochran Medical Center Emergency Department. The emergency department (ED) is a 16-bed emergency department (2 beds are mental health only). John Cochran Medical Center is a moderately sized Midwestern hospital that sees 23,000 patients per year on average in the ED.

Sample

This purposeful sample was all adult females over 18 years of age presenting to the St. Louis VA Health Care System Emergency Department. Veterans were identified utilizing a retrospective chart review with the VHA electronic medical records CPRS. Inclusion criteria was adult females over 18 years of age, stable and receiving health care services from the Emergency Department at the St. Louis VA Health Care System. Exclusion criteria was age less than 18 years, or patients that are not female. If the Trauma Informed Screening Protocol was followed, and the veteran met inclusion criteria, the veteran would then be evaluated for screening.

Implementation plans

All registered nurses and providers in the Emergency Department was provided with education on the importance of IPV screening, and documentation. They were each educated in how to use the IPV screening instruments and resources available. Multiple sessions were required to train all registered nurses (RNs) and providers in the Emergency Department. A total of seven, 40 minute long training sessions were provided by the Intimate Partner Violence Assistance Program coordinator and by the lead investigator. In accordance with the WHO recommendations the didactic training sessions enhanced professionals' general knowledge about IPV prevalence and social determinants of health, knowledge about safe and supportive services for survivors, and knowledge of the resources and support available to patients (WHO, 2019). There was also a clinical skills portion, which educated staff about documentation for IPV screening, scripting used when discussing IPV as well as interventions provided including access to domestic violence shelters.

Participants then watched a short (20 minute) instructional video of examples of IPV screening (as part of the overall 40 minute long training), performed in a variety of healthcare settings (one of which being an ED setting), and after a discussion participants were given the opportunity to ask questions. The pre-recorded case scenario required participants to address visible injuries as well as psychiatric comorbidities that commonly occur in victims of IPV. The goal for each participant (or small group, as resources allow) was to introduce the subject of IPV, appropriately follow the Trauma-informed screening protocol, and address resources and a safety plan for a positive IPV screen with a positive secondary risk assessment screening. A pre- and post-training survey was distributed to staff to validate learning.

The survey was designed to collect demographic information of the respondents (discipline, years of experience in profession), their perceived knowledge, confidence, and skill in this area. The survey included five knowledge questions to assess knowledge of when screening should occur, criterion met prior to screening, documentation requirements and two questions

about safety related to screening. Finally, participants completed questions on their perceived level of confidence, knowledge, and skills on a scale from 1 – 5, with 1 indicating no confidence, skills and knowledge and 5 indicating strong confidence, skills and knowledge. This survey was also sent to the American Federation of Government Employees (AFGE) local representatives (the staff's labor union) prior to the survey being sent to employees. The AFGE received notification of the intent to implement clinical research in accordance with Article 53 of the Master Agreement (Department of Veterans Affairs, 2011). This survey was given immediately prior to training, immediately after training and again 45 days after implementation began to assess the change from baseline of knowledge, skills and confidence after training.

After receiving training and in accordance with the VHA Directive 1198 (Department of Veterans Affairs, 2019), all women over 18 years of age presenting to the Emergency Department were to be screened for intimate partner violence (IPV) using the HITS screening tool if the setting was safe and it was appropriate to proceed. The screening will be conducted annually on the veterans' first contact with the health care system. Possible reasons the screening may not be completed include if there is a child over the age of two present, if there is another adult present or if the individual's medical presentation is not appropriate to answer questions (unconscious or emergent need necessitates attention or transfer out of the screening setting). If the screening is not conducted at the time of triage the clinical reminder will prompt again the next day (or at the next interaction with the health care system). If the conditions are safe and appropriate for screening, then consent will be sought. The veteran must consent to screening and may consent or decline documentation in the electronic health record. If the veteran declines screening, then the screener may still offer universal IPV education, and the veteran may still be screened in the future. If the veteran consents to screening but declines documentation screening will proceed and the text will be deleted from the patient's electronic medical record before it is saved to the patients' chart. If the veteran consents to screening and consents to documentation the primary HITS screening will proceed. If the veteran denies all forms of IPV from the HITS screening tool

they may still be provided with general IPV education or referred to IPV designated staff if necessary. If the veteran endorses at least one form of IPV then the veteran will be asked the secondary abbreviated DAI assessment. If the veteran does not screen positively for the secondary risk assessment further assessment and safety planning with an IPV assistance program (IPVAP) Coordinator or Champion will be optional but all veterans should be offered universal IPV education and intervention. If the veteran endorses a positive secondary screen, further assessment and same day safety planning should be offered and facilitated with the IPVAP Coordinator or Champion.

The above protocol is outlined in VHA Directive 1198 (Department of Veterans Affairs, 2019) and could not be changed during this investigation. This investigation sought to provide education to staff, survey staff to assess perceived knowledge, skills, and competency, and attempted to provide an embedded computer prompt within the triage note in the electronic medical record. It was later determined that it was not possible at the time of the study to embed a computer prompt within the triage note.

Data Collection/Analysis

Data was then collected and analyzed from staff including the following: demographic information of the respondents including discipline and years of experience in profession, and their perceived knowledge, confidence, and skill in this area; five knowledge questions to assess when screening should occur, criterion met prior to screening, documentation requirements and two questions about safety related to screening; perceived level of confidence, knowledge, and skills on a scale from 1-5, with 1 indicating no confidence, skills and knowledge and 5 indicating strong confidence, skills and knowledge. This survey was given immediately prior to training, immediately after training and again after 45 days post implementation to assess the change from baseline of knowledge, skills and confidence after training.

Data was collected and analyzed from patients include the following: The number of females older than 18 years seen in the Emergency Department from February to May, 2023, the

number of females aged 18 years and older seen in the Emergency Department with a documented completion of IPV screening from February to May, 2023; the number of veterans who screened positive for IPV as indicated by the modified HITS; the number of veterans who screened positive for IPV and received a referral to the IPV assistance program (IPVAP); the number of veterans who declined screening; and the number of veterans who declined documentation.

The Hurt, Insult, Threaten, Scream (HITS; Sherin et al., 1998) screening instrument is a tool used to identify IPV, originally intended for use in primary care settings, the tool has since been demonstrated to be reliable and valid in a wide variety of settings. Researchers have validated the reliability, sensitivity and specificity of the modified HITS in samples of female VA patients (Iverson et al., 2015; Portnoy et al., 2018). The modified HITS has five questions patients answer regarding how often a current or former partner perpetrated different types of violence towards them in the last year (never, rarely, sometimes, often or frequently). For this project if the respondent answers anything other than ‘never’ to any of the five items the primary screen is positive, and the screener will be prompted to perform the secondary risk assessment. In a recent study, the modified HITS demonstrated good overall accuracy (area under the curve, 0.86; 95% confidence interval, 0.78-0.94; Portnoy et al., 2018).

The Danger Assessment Inventory (DAI) is a 20-item instrument to determine the risk for intimate partner homicide. To reduce screener burden three items from this instrument were selected by the Veteran’s Hospital Administration (VHA) IPV task force. The abbreviated DAI (identified as the secondary risk assessment) identifies behaviors that point to highest lethality: (1) Has the violence increased in frequency or severity in the past 6 months?; (2) Has s/he ever choked [I.e., strangled] you?; (3) Do you believe s/he may kill you? Response options are “yes” and “no”. Responding ‘yes’ to any one of the three items is considered a positive screen. In a recent study, screening positive during secondary risk assessment was shown to expedite access to psychosocial follow up care (Iverson et al., 2018).

If violence was endorsed nurses were guided and instructed to provide a safety plan. The safety plan provided includes actions such as calling 911 if in immediate danger, preparing a go-bag with essential items (and provides a list of useful items). The safety plan also includes instructions such as leaving the go-bag somewhere concealed but easy to get, practicing how to leave their home as safely as possible, and some simple things to remember in the event of violence. In addition, the safety plan includes a list of important resources at the bottom of the page. If physical violence and/or imminent harm are endorsed the VA also has a Memorandum of Understanding the YWCA for on call coverage at all times, day or night for women experiencing IPV. There are also federal police stationed at the Emergency Department at all times and the Emergency Department is a locked unit. Anyone that is not a staff member must be granted access to walk in the Emergency Department.

All data collected was saved on a government computer requiring a government ID card and PIN to access. The data was stored in an excel sheet that is password protected and data must be kept for a minimum of 7 years according to federal regulations.

Results

The primary investigator invited 43 staff members to participate in the project. The pre-education survey was completed by 21 participants, 32 attended the IPV education, 16 completed both pre-and post-test and 15 completed all parts of the study. One hundred percent of those that completed all components of the study were RN's (Table 1) and had a high mean number of years of experience indicating an experienced participant group (Table 2).

Table 1 Participant Response by Discipline

Discipline	Pretest Survey Responses <i>N</i> = 21	Posttest Survey Responses <i>N</i> = 17	Post-implementation Survey <i>N</i> = 15
RN	76% (<i>n</i> = 16)	94% (<i>n</i> = 16)	100% (<i>n</i> = 15)
MD/DO or NP/APRN	9% (<i>n</i> = 2)	0%	0%
CNA	5% (<i>n</i> = 1)	6% (<i>n</i> = 1)	0%
Medical Student	5% (<i>n</i> = 1)	0%	0%
Police	5% (<i>n</i> = 1)	0%	0%

Table 2 Participant Response by Years of Experience

Years of experience in their profession	Pretest Survey Responses <i>N</i> = 21	Post-implementation Survey Responses <i>N</i> = 15
Less than 1 year	10% (<i>n</i> = 2)	7% (<i>n</i> = 1)
1 - 3 years	5% (<i>n</i> = 1)	13% (<i>n</i> = 2)
4 - 5 years	10% (<i>n</i> = 2)	7% (<i>n</i> = 1)
5 – 10 years	38% (<i>n</i> = 8)	33% (<i>n</i> = 5)
More than 10 years	38% (<i>n</i> = 8)	40% (<i>n</i> = 6)

Note. Percentages may not total 100% due to rounding,

Prior to participation in the education, each session was provided with copies of informed consent about the project. This consent was provided verbally and in writing to each person prior to completing any surveys. Those who consented to participate in the study completed a confidential pretest survey. They placed a confidential, self-chosen five-digit alpha-numeric code on the survey, which enabled post-test and post-implementation result correlation. The survey tool had two biographical questions, five multiple choice knowledge-based questions. Additionally, three questions were assessed on a 5-point Likert-type scale for staff to rate their

perception in the following three domains: confidence, knowledge, and skill. The respondents were also screened regarding their barriers for the screening process.

The summed scores for each of the three domains and actual knowledge questions were subjected to a one-way repeated measures analysis of variance (ANOVA) with time. Mauchly's test of sphericity was performed on each of the four summed scores, for two of the four scores Mauchly's test of sphericity indicated that the assumption of sphericity had not been violated: actual knowledge, $\chi^2(2) = 2.94, p = .229$; perceived confidence, $\chi^2(2) = 1.15, p = .563$. Actual knowledge over time was not found to be statistically significant $F(2, 28) = 1.30, p = .289$. Perceived confidence over time was also not found to be statistically significant $F(2, 28) = 1.08, p = .353$.

For two of the four scores Mauchly's test of sphericity indicated that the assumption of sphericity had been violated (perceived knowledge, $\chi^2(2) = 6.69, p = .035$; and perceived skill, $\chi^2(2) = 9.53, p = .009$) and epsilon (ϵ), calculated according to Greenhouse Geisser (1959), was used to correct the one-way repeated measures ANOVA. Perceived knowledge ($\epsilon = 0.71$) was found to be statistically significant $F(1.43, 19.97) = 10.94, p = .002$, and perceived skill ($\epsilon = 0.66$) was also found to be statistically significant $F(1.32, 18.43) = 15.83, p < .001$.

After 30 days it was determined that administrative intervention was required due to low compliance with the RHSS. After consulting with the Advisory Committee for this project, three additional questions were added to the post-implementation survey. The post-implementation was sent out by email and provided to staff in person 45 days after the end of the education week. At that time 19% of the respondents indicated that they still needed additional skills and knowledge to perform the RHSS competently, and 46% responded that having access to brochures, quick reference guides or "cheat sheets" would be useful. Regarding the questions about barriers to screening, 73% ($n = 11$) of respondents indicated that lack of time was a barrier, while only 26% ($n = 4$) indicated that lack of training (either lack of knowledge on how to screen, $n = 1$, or lack of knowledge on how to document the screen, $n = 1$, or both, $n = 2$). The last question included on

the post implementation survey asked respondents to provide recommendations on improving IPV screening in the future. The recommendation to add the RHSS to the Triage note was identified by 47% of respondents (n = 7), 47% also recommended training other types of providers to perform the screening (I.e., physicians, techs, etc.), and 13% (n = 2) recommended adding more reminders to the clinical environment to remind staff to perform the screening (I.e., magnets, posters, etc.). While not statistically significant, one respondent recommended adding the RHSS to MyHealthEVet, which is a confidential way for veterans to access their own patient record online, and one respondent requested making the screening easier to access.

The pre-implementation period was from February 4th, 2023, to March 21st, 2023. There were 385 female visits during that time and 314 unique patients. The implementation period was from March 22nd to March 29th. There were 74 female visits during that time and 66 unique patients. The post-implementation period was from March 30th to May 13th. There were 372 female visits during that time and 294 unique patients. There were 23 total screens performed; 2 did not consent to screen, 1 screening not performed due to a person over the age of 2 accompanying the patient and only 9 screenings were completed on women. Screening rates with the RHSS increased from 0 screenings prior to the intervention to 3% of women screened post intervention.

Discussion

Implementation of this quality improvement project accomplished increased RHS screening and increased staff knowledge, skills, and confidence. Of the patients seen during the project implementation timeframe, only 3% of female patients who presented to the ED were screened, falling short of the stated goal of 25% screening rate. Data that was collected during this first phase of a PDSA cycle may be improved upon for any subsequent PDSA cycles to better understand the survey demographics and better implement screening.

The five-item actual knowledge test, and the perceived confidence scores were not found to be statistically significant, but may be clinically significant, given that mean scores increased

across all four domains (Table 3) from pre-test to post-implementation testing (after 45 days).

Two domains that were found to be statistically significant were perceived knowledge and perceived skill. The five-item actual knowledge score had limited scope of the content that could be evaluated and could be more thoroughly evaluated in future PDSA cycles.

This project had several limitations. The project had to be decreased in overall length from 6 months to 3 months due to coordination with AFGE (the union) and survey approval. Additional subsequent PDSA cycles would be improved by obtaining survey approval three to four months prior to project implementation to ensure the project could begin in a timely manner. Also, the Emergency Department during the time of project implementation had a staffing shortage and this may have resulted in less time to engage with each patient and less tolerance for quality improvement initiatives in general. With the Relationship Health and Safety Screening Toolkit being projected to roll out on a national level, overall compliance with the screen may have been limited by reluctance to adopt a practice that is still being improved (and thus will change, resulting in an altered appearance). The staff were also educated that universal screening with the Relationship Health and Safety Screen would soon become mandatory according to VHA Directive. Without mandatory screening per policy, staff may have felt less compelled to screen patients. Universal screening is more likely to occur if written policies exist and standard procedures have been developed for screening (Tavrow et al., 2017).

Suggestions for subsequent PDSA cycles would be to include the RHSS in the triage note. An additional suggestion is to coordinate the timing of the screening implementation with the release of the newest version of the screening. When providing education, the staff members were notified that some of the scripting would change and/or look different in the coming month. This may have contributed to the overall low screening compliance rate. Additionally, during the project there was not ED administrative oversight for compliance. Chart audits and frequent reminders by administration should be considered with all new changes in practice. Management

Table 3 Staff Survey Responses by Domain

Scale	Pretest (1)		Posttest (2)		After 45 days (3)		<i>F</i> value	<i>df</i>	<i>P</i> value	Pairwise Comparison
	M	SD	M	SD	M	SD				
Actual Knowledge	4	0.7	4.4	0.6	4.3	0.7	1.3	2, 28	0.289	1 < 2, 3; 2 > 3
Perceived Knowledge	8	2.2	11.4	3.3	11.9	2.3	10.94	1.43, 19.97	0.002	1 < 2, 3; 2 < 3
Perceived Confidence	11.5	2.1	11.6	2.5	12.4	2	1.08	2, 28	0.353	1 < 2, 3; 2 < 3
Perceived Skill	8.9	2.4	12.2	2.6	12.4	2	15.83	1.32, 18.43	<i>p</i> < .001	1 < 2, 3; 2 < 3

should verbally remind staff of the importance of screening and conduct random chart audits to confirm that screening occurred.

The IPV screening rate in our project remained less than 25% indicating that continued interventions to increase screening rates are needed. In addition, future PDSA cycles may consider focusing on just one domain to determine educational effectiveness. The survey staff completed was created to have a limited number of questions to improve overall completion rates and a more thorough study of one or more domains may provide more valuable information for education improvement.

Conclusion

This quality improvement project was focused on increasing routine IPV screening in the Emergency Department through education. The project's aim, to improve staff's knowledge, skills, and confidence through educational intervention, was successful. Results showed that an increased number of patients were screened after project implementation, though future PDSA cycles and data collection should take place for ongoing improvement. This project demonstrated that education increased staff knowledge, perceived skills, and confidence in universal IPV screening.

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Appendix A**Table A1**

Number of Times Each Respondent Screened with RHSS

	N	%
None	7	47%
1 time	1	7%
2-3 times	5	33%
4 or more times	2	13%

Table A2

Barriers to screening

Barrier	Post-Implementation Survey Responses <i>N</i> = 15
Lack of time	73% (n = 11)
Confidence in ability to implement RHSS	0
Did not agree with the utility of the RHSS	0
Lack of training in how to use the screening	7% (n = 1)
Lack of training in how to document the screening	7% (n = 1)
Lack of training to both use and document the RHSS	13% (n = 2)

Table A3

Recommendations to Improve Screening

Possible Survey Responses	Post-Implementation Survey Responses <i>N</i> = 15
Add the Relationship Health and Safety Screening or similar screener to the Triage Note?	47% (7)
Train other types of providers to perform the screening (i.e., physicians, techs, etc.)	47% (7)
Add more reminders to the clinical environment to remind staff to perform the screening (magnets, posters, etc.)	13% (2)
Incentivize participating in the education and screening implementation	0%
Other	13% (2)

Note. Percentages may not total 100% due to rounding,

Table A4

Staff Responses to Survey

Scale and Subscales (Possible Range)	Mean (Standard Deviation)		
	Pretest	Posttest	Post-Implementation
Confidence (1-5)			
Discuss IPV with my patient	3.9 (.768)	3.89 (.963)	4.13 (.640)
Appropriately respond to disclosures of IPV	3.95 (.865)	3.94 (.873)	4.20 (.676)
Identify IPV indicators based on patient history	3.95 (.740)	3.94 (.802)	4.07 (.704)
Skill (1-5)			
Document RHSS in CPRS	2.45 (1.146)	4.11 (.900)	4.00 (.756)
Identify IPV indicators based on patient history	3.45(.759)	4.06 (.873)	4.20 (.676)
Trauma Informed Care	3.30 (.801)	4.11 (.900)	4.20 (.676)
Perceived Knowledge (1-5)			
Referral resources	2.65 (.875)	3.78 (1.060)	4.00 (.756)
Reporting Requirements	2.95 (.945)	3.78 (1.060)	4.07 (.799)
IPV Protocol/Policy	2.75 (.851)	3.83 (1.043)	3.80 (.862)

Table A5

Table A6

Patient Relationship Health and Safety Screening Responses

Demographics of Veterans Screened with RHSS

Period	Pre-Implementation Period from February 18 th to March 4 th , 2023			Implementation Period from March 6 th to March 29 th , 2023				Post-Implementation Period from March 30 th - May 13 th , 2023
Females Screened	385	1	1	74	3	3	0	372
Male Screened	304	1	0	66	1	3	9	294
RHSS Performed in ED	0			0				23
Female RHSS Performed in ED	0			0				9

Table A7 Screening Results

	Female (n=9)	Male (n=14)	Total (n=23)
Positive Primary Screens	0	0	0
Negative Primary Screens	7	13	20
Positive Secondary Screens	0	0	0
Negative Secondary Screens	0	0	0
Screens – Not Done*	1	0	1
Screens – Did Not Consent	1	1	2

*Screen not done due to a child present over the age of 2.