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Improving Care Transitions for Individuals with Suicide Risk After Discharged from Acute Unit

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Abstract

Background: Suicide is a public health problem and the 10th leading cause of death in the US. Suicide accounted for more than 47,5000 deaths in the US in 2017, translating to about 130 suicide deaths each day. An average of 20 veterans commits suicide each day compared to 93 suicides in the general population in the US. Individuals with suicide risks are 300 times at an increased rate of suicide death in the first week and 200 times in the first month of hospital discharge. Nurses are in a strategic position to improve the care transition of individuals with suicide risk. But nurses lack the use of EHR suicide risk decision tools and nursing-specific suicide training.

Purpose: This project aims to improve the care transitions of individuals with suicide risk discharged from acute care units to outpatient by 50% over 6 weeks.

Methods: The IT embedded the C-SSRS template as part of patients' EHR instead of a standalone tool. Ten 5-point Likert scale pre-survey questionnaires were administered face-to-face to the nurses to assess their baseline skills. The project leader facilitated nursing-specific suicide education, including training regarding the C-SSRS template embedded in EHR. The project leader administered a post-survey two weeks after the training to determine the impact of the intervention.

Results: Overall, the nurses demonstrated mean improvement scores of 89% with patient care transitions and 90% in nurses' professional skills and attitudes after the intervention compared to 0% and 47.1% before intervention.

Conclusion: Decreasing suicide rates and prevention poses a significant challenge to healthcare professionals and organizations. With the implementation of an embedded EHR C-SSRS, staff

training, and professional collaboration, healthcare organizations can improve the care transitions of individuals with suicide risk and decrease the rates of suicide.

Keywords: suicide prevention, care transitions, suicide risk assessment, veteran suicide

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Problem Description

Suicide is tragic, a challenging public health issue, and on the rise. According to the latest available New Jersey (NJ) suicide data, a total of 768 adults died by suicide in 2017, and veterans accounted for 76 of these deaths or 10% (New Jersey Veteran Suicide Data Sheet [NJVSDS], 2017). The Veteran Affairs National Strategy for Preventing Veterans Suicide [VANSPVS] (2018-2028) reports an average of 20 veterans commit suicide each day compared to 93 suicides in the general US population. VANSPVS (2018-2028) further said that about 6 out of the 20 veterans who committed suicide saw their healthcare provider or accessed health care services in the month preceding taking their lives. The National Action Alliance for Suicide Prevention [NAASP] (2019) reported 1 out of 7 people in the US who committed suicide received acute mental health services in the year preceding taking their own life. The National Veteran Suicide Prevention Annual Report [NVSPAR] (2019) reported that the veteran suicide rate is 1.5 times higher than the rate of non-veterans after modifying for differences in age and sex.

The Veteran Affairs (VA) is aware of the increased rate of suicide among veterans in the community. The VA continues to embark on robust national strategies and partnerships with local community agencies to prevent veterans' suicide (Office of Mental Health and Suicide Prevention [OMHSP], 2020).

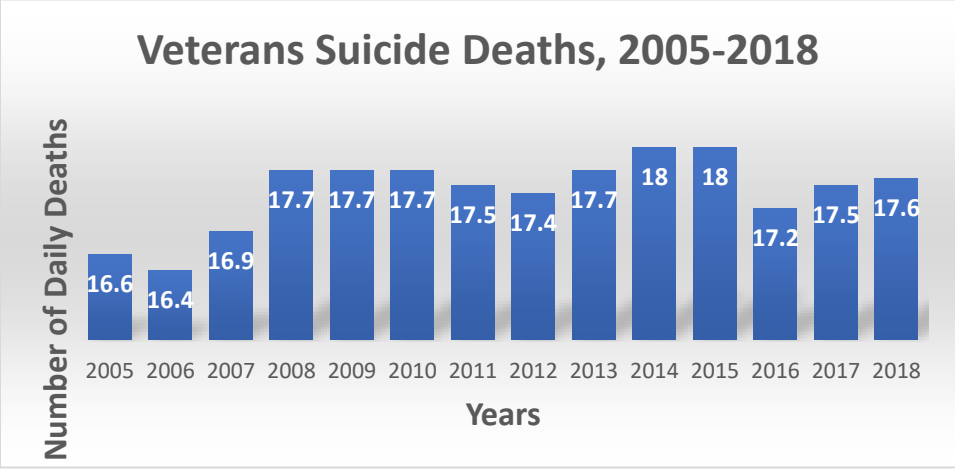
Nurses are essential professionals when planning and discharging patients with suicide risk. There are no acute care nursing discharge protocols and nursing-specific suicide prevention education. These highlight gaps in the current care transition practices and underscore the need

to evaluate the current approach, develop effective suicide discharge protocol, and train nurses to implement and improve the care delivery for individuals with suicide risk after discharge from the acute unit.

Available Knowledge

Despite the robust suicide prevention strategies by the VA, the number of veterans who commit suicide each year remains disproportionately high. A total of 6,435 veterans died in 2018, compared with 6,399 in 2017 and 6,056 in 2005 (NVSPAR, 2020). The NVSPAR (2020) reported an average of 16 to 18 veterans committed suicide daily from 2005 to 2018 (Figure 1). There are various reasons for the increasing number of veterans' suicide deaths. Veterans are military individuals with easy access to firearms and trained in the use of firearms. Suicide by firearms is the number one and most lethal method of suicide. Veterans use the most lethal method, which accounted for their higher rate of 68. 2% suicide deaths in 2018 compared to 48.2% among non-veterans (NVSPAR, 2020). The other reasons that accounted for 59.6% of veterans' suicide deaths in 2018 are the diagnosis of mental illness disorders such as bipolar, post-traumatic stress disorder, and substance use disorders (NVSPAR, 2020).

Figure 1



Data from the 2020 National Veteran Suicide Prevention Annual Report (va.gov)

Suicide is the act of self-harm to end one's life. The number of individuals who commit suicide in the US each year is alarming and continues to rise. The suicide rate increased to more than 30% in half of the states in the US since 1999 (CDC, 2018). The CDC (2018) has classified suicide as a large and growing public health problem in America. It is the 2nd leading cause of death for ages 10-34 years old, the 4th leading cause of death for ages 35 to 54 years old, the 5th leading cause of death for ages 45 to 54, and the 8th leading cause of death for ages 55 to 64 in the US (CDC, 2020; Stone et al., (2017). The CDC (2020) reported suicide is the 10th leading cause of death in the US and claimed more than 48,000 lives in 2018, accounting for one death every 11 minutes. The CDC (2019) further reported 10.6 million adults in America had severe thoughts of suicide, while 3.2 million made suicide plans and 1.4 million attempted suicide in 2017.

The World Health Organization (WHO, 2020) reported suicide is a global public health problem and that about 800,000 people die globally from suicide each year. The WHO (2020) reported suicide claim a life every 40 seconds globally. To raise global awareness for the increasing suicide rates and to promote advocacy for the prevention of suicide, WHO declared September 10, 2020, as a world suicide prevention day (WHO, 2020).

The Joint Commission [TJC] (2019), a leader in healthcare quality and patient safety regulation, has recognized the alarming rates of suicide nationwide. To improve the safety of patients with suicide risk and ultimately prevent suicide, TJC made suicide prevention the top national patient safety goal on July 1, 2019, at all Joint Commission-Accredited Hospitals (JCAH) and behavioral healthcare organizations nationwide. On July 1, 2020, given the continual increase in suicide rates and suicide being the 10th leading cause of death in the US, TJC expanded this requirement to include all TJC accredited critical access hospitals.

The NAASP (2019) reported that the transition phase from acute care to outpatient is vital for patients with suicide risk because their suicide rate increases 300 times during the first week and 200 times in the first month after discharge. Furthermore, the NAASP (2019) reported patients continue to remain at risk for suicide death even after three months of their discharge from inpatient. Their vulnerability to a suicide death can linger for a longer time in some patients. Chung et al. (2017) conducted a systematic review on patients' rate of suicide post-discharge and found no decrease in the rate of suicides among discharged patients in the last 50 years. The researchers reported the rate of suicide continues to rise in the weeks, months, and over the years among recently discharged patients despite care innovations and the availability of resources in the community.

With the knowledge that patients with suicide risks are at increased risk for death within 30 days of their discharge from acute care settings, the VA updated its discharge policy to require patients with suicide risk to receive four follow-up visits within 30 days post-discharge. The follow-up care requirement focuses mainly on phone calls to discharged veterans and ensuring their attendance at follow-up appointments with providers (VA, 2017).

The aftermath of a suicide is devasting. The national publicized suicide deaths of celebrities like chef Anthony Bourdain, fashion designer Kate Spade, and others continue to lend credence that suicide does not discriminate and can affect anyone. Suicide affects all ages, cultural backgrounds, ethnicities, races, sex, educational levels, celebrity, and socioeconomic status (The National Institute of Mental Health [NIMH], 2020). Although suicide affects all, the rates are reportedly higher in some groups of people than others. The NIMH (2020) reported the rate of suicide in 2018 was highest for American Indian/Alaska Native, non-Hispanic males at 34.8 per 100,000 and females at 10.5 per 100,000). The second group is white males at 30.4 per

100, 000 and white females at 8.3 per 100,000. The Asian Pacific Islander males are in the middle range at 10.8 per 100,000, and females are at 4.1 per 100,000. Blacks and Hispanics have the lowest rates, with 12.0 and 2.1 for males respectively, and 2.9 per 100,000 equally for females from both races.

Apart from the loss of lives, suicide deaths have negative emotional and health consequences such as guilt, shock, anger, and depression on families, loved ones, and friends of individuals who committed suicide (CDC, 2020). The survivors of suicide attempts experience physical injuries such as broken bones and other mental health issues like depression (CDC, 2020). Besides individual impacts, suicide negatively impacts the community and increases the nation's health care costs. The CDC (2020) reported suicide attempts and deaths cost the country almost $70 billion annually in lifetime medical and work-loss costs.

There is no singular risk factor or cause of suicide. The cause of suicide is multifactorial or a combination of factors. Some of the factors or combinations reported to increase the risk for suicide are a personal history of mental illness, chronic physical disease, job loss, divorce, death of loved ones, substance abuse history, history of prior suicide attempt, race, age, gender, financial problems, legal problems, easy access to weapons, military service history and many others (CDC, 2020). These individual variabilities are drawbacks to accurate suicide risk prediction and prevention (Dueweke et al., 2018).

Rationale

The period of care transitions from inpatient to outpatient is vulnerable for patients with suicide risk. It is the hallmark period for the effective transition of care, patient discharge planning, communication, and collaboration between inpatient and outpatient providers. Communication and collaboration between providers are vital to decreasing patients'

vulnerability to suicide risk post-discharge. To reduce suicide rates, connecting discharged patients with suicide risk to appropriate community providers and suicide prevention resources is paramount.

The framework model chosen to guide the quality improvement project is the Plan-Do-Study-Act [PDSA] (Appendix A). The PDSA cycles are action-oriented and iterative. The model has been used extensively by healthcare organizations worldwide and is an efficacious tool at accelerating change, improving healthcare processes, and achieving desired outcomes (Institute for Healthcare Improvement [IHI], 2020). It is suitable for a quality improvement project with an identified goal (Silver et al., 2016). Its use will help identify and eliminate redundant care processes, which are barriers to the effective and efficient delivery of care for patients with suicide risk post-discharge. It is easy to pilot on one unit, efficient at allowing small increments of change over time, and helps to determine whether the desired change resulted in an improvement or not (IHI, 2020).

Specific Aims

The NAASP (2019) reported that the goal of inpatient treatment for a patient with suicide risk is for the alleviation of immediate crisis and stabilization, and therefore should constitute more than only treatment. Because patients with suicide risks discharged from acute care units are 300 times at elevated suicide death risk during the first week post-discharge and 200 times higher at risk in the first month than the general population, it behooves the need for continuum outpatient follow-up care. NAASP (2019) suggested that these elevated risks remain higher up to three months and longer post-discharge. (NAASP, 2019).

Therefore, this project aims to improve care transitions for patients with suicide risk discharged from acute care unit to outpatient by 50% over 6 weeks. The project leader will

implement a standardized nursing suicide discharge protocol. The project leader garnered support from the unit stakeholders who find this project useful and goal-oriented when improvement with the suicide discharge process is a high priority for the organization. The project leader conducted the following activities to help achieve the aims:

1. Scheduled and conducted formal meetings to identify team members, roles, and responsibilities, establish project timelines and meeting schedules
2. Conducted evaluation of the current discharge and referral processes of patients with suicide risk to establish a baseline
3. Administered pre-and post-survey questionnaires to ascertain staff baseline knowledge, self-efficacy, and skills with management and discharge of patients with suicide risk
4. Created a standardized nursing discharge template and imbed it in the EHR as part of the discharge protocol for use when discharging patients with suicide risk
5. Conducted interactive staff education on the new discharge protocol to ensure standardization, consistency, and continuity of care practice

Methods

Context

The project setting is a 26-bed acute medical unit at the VA hospital in a Mid-Atlantic state. The unit serves only veterans and military servicemen and women and their families regardless of their state of origin. Patient admission to the acute medical care unit is through direct admission from the VA emergency room, veteran self-admission, family referrals, intra-facility transfers from other VA medical units, and transfers from area hospitals. The patients present with various acute and multiple chronic medical, psychiatric comorbidities and polysubstance abuse such as hypertension, diabetes, hyperlipidemia, cancers, chronic pain,

respiratory illnesses, bipolar disorder, post-traumatic stress disorder (PTSD), schizophrenia, schizoaffective disorders, depression, anxiety disorders, suicidality, substance abuse disorders, including alcohol, opioid, cocaine, and other drugs. The acute care environment is dynamic, fast-paced and patients are quickly stabilized within few days of admission and discharged with follow-up appointments with their outpatient providers and clinics.

The unit staff includes health providers (MDs, DOs, NPs, PAs), nurses, social workers, recreation therapists, dietitians, nursing assistants, health technicians, and ancillary staff. The nurses were essential to this project as the focus was to improve the nursing discharge protocol for patients with suicide risk. The educational level of the registered nurses ranges from licensed practical nurses to doctoral-prepared nurses. The nurses work either 8-hour or 12-hour shifts around the clock. The 12-hour shift schedule permits a nurse to work three 12-hour shifts and be off for up to one week without using vacation days. The condensed shift schedule may impact the ability to train all nurses, the data collection, and intervention outcomes.

Nursing retention in the acute care unit is comparatively good. About 75% of the nurses have worked on the same acute unit for five years and longer. However, the unit experiences nursing turnover from time to time, just like other units in community hospitals. Therefore, having consistent staff familiar with the acute care process and the continuum of care needs of discharged patients with suicide risk is vital to improve care transitions successfully.

Cost-Benefit Analysis

Suicide is expensive and takes a toll on the survivors, families of the deceased, friends, community, and society. Shepard et al. (2015) reported the average cost of one suicide is $1,329,553, considering the medical expenses and loss of work productivity. This figure will

amount to trillions when multiplied by the numbers of veterans who attempt suicide and by those who died by suicide yearly.

The benefits of conducting this project outweigh the cost of one suicide for the organization. Improvement in patients' care transitions will translate into delivering patient-centered care, a better quality of care, increased patient satisfaction, decreased suicide deaths, and healthcare costs. Preventing suicide spares individuals, families, and loved ones from the intense emotional, physical, and mental anguish and illnesses such as grief, trauma, guilt, pain, stigma, isolation, depression, anxiety, and PTSD associated with the aftermath of suicide. Improving care transitions of patients with suicide risk is a win-win for patients, families, communities, and society. The cost estimate for the project was the participants' time for meetings, completing surveys, education, and training.

Table 1

The Estimated Average Nursing Salary Cost for the Project

Participants	Cost of Interventions
15 Nurses: Attended three 1-hour meetings at an average of $55/hr.	= $2,475
1 Project leader	No cost: potential savings is $12,500 to $25,000 based on $50 to $100/hr x 250 hours if using an outside consultant (consulting.com)

The project leader is a doctoral student who planned, implemented and evaluated the proposed project as a requirement to fulfill the Doctor of Nursing Practice degree program at no cost to the organization. There is no material or equipment purchase for the project. The staff education and training were conducted on the unit as in-service training during staff work hours, and the organization did not incur extra expenditure in overtime pay. However, unit nurses were

required to block 1 hour for the three scheduled meetings for a total of 3 hours each. The cost of one suicide is 200 times more than the total team salary for the project. There are also other hidden costs of suicide, such as the impact of stigma, which is difficult to quantify with a dollar amount. The benefit for the organization outweighed the cost of this project.

Interventions

The meeting held by the project leader one month before intervention with the administrators and stakeholders led to the selection of a standardized EHR suicide screening tool, the Columbia-Severity Suicide Rating Scale (Appendix B: C-SSRS). The choice of the C-SSRS eliminated the need for development of the nursing discharge checklist initially proposed by the project leader. The C-SSRS is a 6-question, easy-to-use evidence-based practice (EBP) suicide risk assessment tool with the ability to predict an individual's level of risk at the point of care. The Information Technology (IT) department was on board and embedded the C-SSRS as part of patients' EHR before the intervention go-live date.

The project leader reviewed and analyzed the unit's current care transition of patients with suicide risk to establish a baseline. The Supplier, Input, Process, Output, and Customer (SIPOC) diagram illustrates the current process (Appendix C), while a fishbone diagram depicts identified gaps in the process (Appendix D).

A week before the implementation, an email was sent to all unit nurses across shifts, alerting them to the upcoming project and inviting them to the first face-to-face project meeting. The three proposed phases were consolidated into one phase of 60 minutes for a total of 15 hours of nursing salary cost for the organization. The first intervention meeting created a team charter that defined the project goals, identified team members' roles and responsibilities, resources, constraints, and established project timelines and meeting schedules. A total of 15 permanent

registered nurses on the unit attended the training signifying 100% attendance. The 3 agency nurses were not scheduled to work and did not attend. The nurses' experience ranged from 5 or more years of clinical nursing. The pre-survey (Appendix E) is a 5-point Likert scale questionnaire was administrated to the nurses at the first meeting. The pre-survey served as a need assessment and elicited nurses' baseline knowledge, skills, and perceived self-efficacy related to management and discharge protocols of patients with suicide risks. The survey responses were kept anonymous as each survey was assigned an identifying number and all data was linked to this number. The responses from the survey were incorporated into the development of educational materials and used to address any flaring issue.

Following the completion of the pre-survey, the project leader facilitated face-to-face interactive nursing training. The training focused on demonstrating the completion of the actual nursing discharge summary note with the embedded C-SSRS template utilizing a pseudo-electronic patient chart. All 15 nurses returned the correct demonstration. Additional discussions focused on the benefits of using the C-SSRS template and initiating appropriate care transition at discharge for patients with suicide risk. The project leader also discussed the 3-levels (low, moderate, and high) of the C-SSRS suicide ideation severity scores and emphasized to the nurses that suicide prevention is everyone's responsibility and can be achieved when all healthcare professionals collaborate. At the end of the training, the project leader kept a reference binder containing an explanation of the C-SSRS template and instructions at the nurses' station to serve as a reference at the point of care. Two weeks after the intervention, the project leader administered the post-survey questionnaires, which were the same as the pre-survey questionnaires, to determine the impact of the intervention and the training activity. The same 15 nurses completed the post-survey questionnaires.

Study of Interventions

The interventions were evaluated at 30-days post-implementation for the first PDSA cycle of this project. Post-implementation documentation data was collected through the EHR and compared with the baseline data to assess the impact of the intervention and determine whether the observed outcomes are due to the intervention. The bar graph (Figure 2) depicts the comparison results. The post-intervention documentation in the EHR monitored and tracked the readmissions of patients with suicide risk discharged within the 30-day benchmark. The longer discharged patients with suicide risk remained in the community without suicide episodes or readmission indicated stability and an improvement with care transitions. One readmission within 12 months is the gold standard and predicts improved patient care transition and best outcomes. A patient readmitted after 30 days shows better outcomes and warrants review and modification of discharge plan of care. Readmission within 30-days shows inadequate, inappropriate, lack of stabilization, poorer outcomes, and ineffective discharge referral and warrants plan change. Staff post-survey questionnaires determined whether the delivered education enhanced staff knowledge and self-efficacy. A positive satisfaction rating with the current process indicates improvement and the impact of the intervention.

Measures

The project leader assessed the EHR at 30-day post-intervention for the number of discharged patients with suicide risk, documentation of care transitions, and compared patient names with daily new admissions to identify rehospitalization within 30 days. The project leader assessed the EHR for completeness of C-SSRS template clinical documentation and accuracy of data. A Check/Tally Sheet (Appendix G) was used to record and track discharges and readmissions. The Check/Tally Sheet is a valuable quality improvement tool that is adaptable,

easy to use, and offers the advantage of speeding record collection in real-time. It allows for easy visualization and comparison of recorded data in an organized format (American Society for Quality (2020).

Many contextual elements contributed to the success of the intervention. A contextual component that can contribute to the success is shared interest and open communication. Suicide prevention is a high-priority goal for the organization, and the project received support from stakeholders. Even though the project was carried out during the COVID-19 pandemic, the unit did not experience a COVID-19 surge during the implementation phase. The surveys were collected on the unit level and may not represent the perspective of the top leadership.

Analysis

Quantitative methods were used to analyze and summarize the data collected through the EHR on the new discharge protocol. Comparative analysis was performed to examine the impact of the intervention on patients' care transitions and nurses. A review and analysis of the nurses' comments on the survey questionnaires and feedback was conducted to determine the effects of the intervention, identify issues and ways to improve the process. The use of a run chart (Figure 3) was utilized for the visual display of data and to help understand the intended and unintended variations within the data, including the effect of time.

Ethical Considerations

There was no conflict of interest. The project received approval from both the VA Quality Improvement Department and Institution Review Board and the University of New Hampshire Nursing Clinical Review Committee.

Results

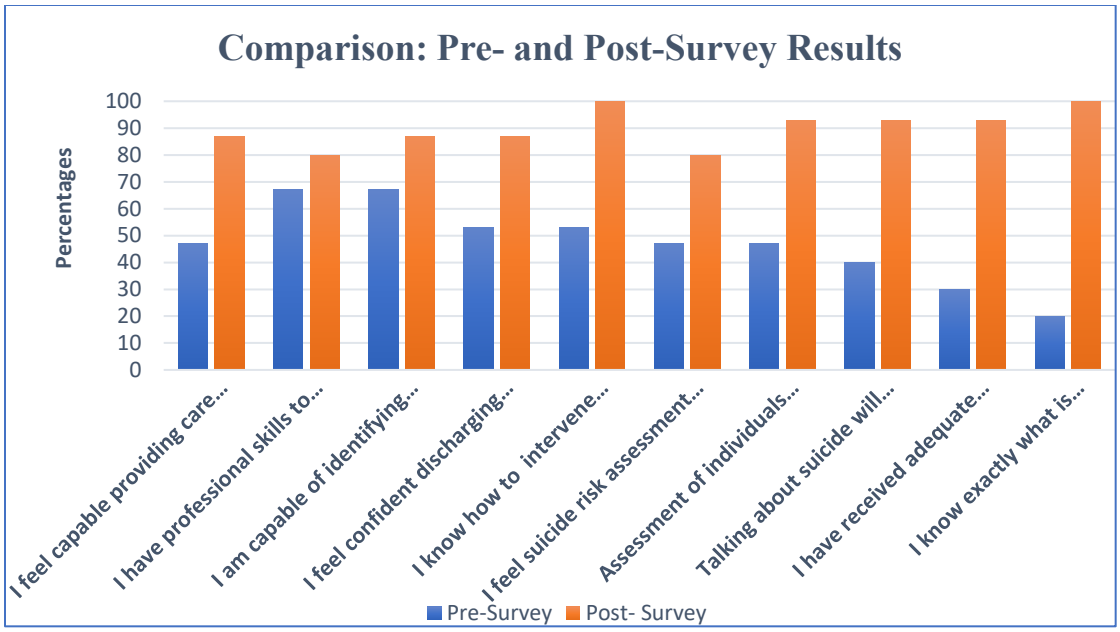
The three proposed intervention phases were consolidated into one phase of 60 minutes costing 15 hours of nursing salary. The consolidation was appropriate to minimize frequent interaction during the COVID-19 pandemic. It was considered practical for facilitating the training when most nurses are on the schedule to work. It resulted in a decreased project cost, $825 in nursing salary instead of the proposed cost of $2,475. The Microsoft Teams video conferencing was not used because the unit did not experience a COVID-19 surge.

The unit's current discharge process evaluation indicated a lack of standardized EHR suicide risk assessment tools and protocol. The review of 77 patients discharged one month before the intervention showed inconsistent nursing documentation and no care transition protocol. There was zero baseline information. Multiple factors were identified as contributors to the unit's lack of discharge protocol and care transitions for individuals with suicide risk. There were gaps in communication, staff issues, technology, environment, patients, and the organization. The SIPOC (Appendix C) illustrated this result. The fishbone diagram (Appendix D) visually depicts and elaborates on these identified gaps.

The post-survey results show a mean score of 90% improvements in staff knowledge, skills, and attitudes compared with a mean score of 47.1% at pre-survey (Appendix F) (Figure 2).

Figure 2

Result of Pre- and Post-Surveys



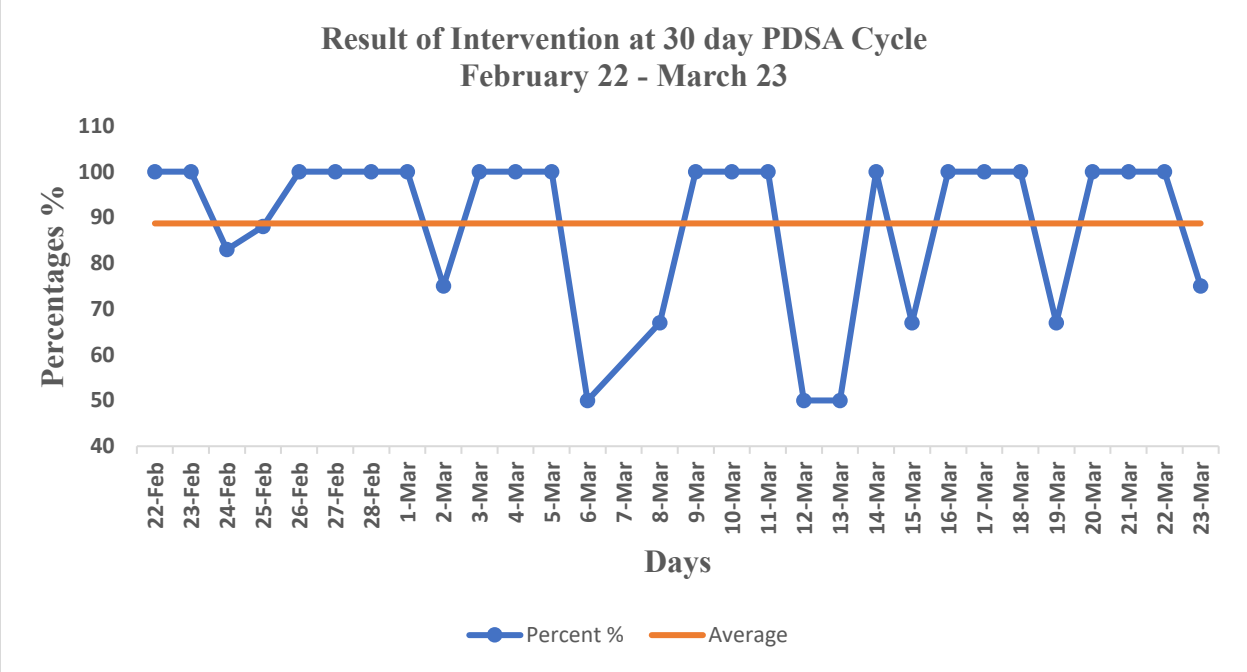
Additionally, the results of the EHR assessed by the project leader 30-days post-intervention for the first PSDA cycle shows a mean score of 89% improvement in care transitions compared with the discharge process without referrals before the intervention (Run Chart, Figure 3). The daily patient discharges during the 30-days ranged from a minimum of 0 to a maximum of 8. There was no discharge on March 7, so no data was collected for this date (Check/Tally Sheet (Appendix G). The project leader reviewed the EHR of 88 discharged patients' and collected data over three days. Eighty-seven percent of the discharge patients had a completed C-SSRS template, and their care transitions were documented in the EHR by the nurses. The primary outcome measures were nurses' adherence to completing the embedded C-SSRS template and consistent documentation of care transitions for patients with suicide risks at discharge. Nineteen days out of the 30 days reviewed showed 100% adherence with care transition documentations. There was no readmission within the reviewed timeframe.

Missing Data

Ten discharged patients did not have the C-SSRS completed, and no reason was documented for the omission. The only probable explanation for the omissions may be the use of agency nurses on the days these patients were discharged.

Figure 3

Run Chart of Results of Intervention



Discussion

Summary

As mentioned in the available knowledge section, the first week post-discharge is a period of increased vulnerability in the lives of individuals with suicide risk. Individuals with suicide risk are 300 times higher at risk of death from suicide during the first week of discharge than any period (NAASP, 2019). Nurses are in the frontline and in a strategic position to improve the care transition of individuals with suicide risk. Unfortunately, nurses do not receive the appropriate suicide tools such as the C-SSRS and nursing-specific suicide training to carry out their job functions.

The project aims to improve nursing care transitions for individuals with suicide risk discharged from the acute care unit by 50% over six weeks. The results at 30 days post-intervention demonstrated mean scores of 89% improvement in nursing care transitions and 90% in professional knowledge and skills. This achievement of the project goal is significant from a zero percent (0%) baseline. The use of the EHR, alongside nursing-specific training delivered by the project leader, is credited for improving the care transition within 30 days. The training activity enhanced the nurses' clinical documentation skills, knowledge, confidence, and understanding of appropriate care transitions for individuals with suicide risk. The support from the stakeholders and collaboration from the unit nurses were vital to the success and achievement of the project goal.

Interpretation

The result of the interventions and training demonstrated the best outcomes for individuals with suicide risk. The benefits of using EHR to improve the quality of healthcare delivery are well documented. The embedment of the C-SSRS template as part of patients' EHR rather than a standalone tool improved the process. The result agrees with (Islam, Poly & Li, 2018; McGonigle & Mastrian, 2018). They reported the use of EHR holds the promise to decrease fragmented care, promote care coordination, and improve the quality of patient care delivery.

The training delivery method was impactful. It improved the nurses' professional skills and confidence and changed their attitudes towards suicide. As indicated by the post-survey results, a higher percentage, 90% of nurses, shifted their responses and agreed to have achieved professional knowledge, skills, and confidence after the training than 47.1% before the training. These results agree with Harned et al. (2017) findings that clinicians who are adequately trained

in the utilization of suicide risk assessment tools felt confident identifying patients at risk and implementing appropriate interventions.

Limitations

There were limitations to this project. The project leader facilitated the nursing suicide training on one unit, and data was also collected on one unit, making the generalizability of the results to other units impossible. The agency nurses were not scheduled to work on the training day and did not receive any training. It would have been nice to train all nurses on the unit to help achieve optimum performance and continuous quality improvement. Additionally, given the timeframe for the project and certain restrictions imposed due to the COVID-19 pandemic, the patients' satisfaction survey was not carried out. It would be helpful to survey the discharged patients to ascertain their satisfaction with their current care transition.

Conclusions

Suicide is on the rise and costly. It accounts for the loss of lives and increases the national healthcare budget. Improving the care transition of individuals with suicide risks is vital to decreasing suicide rates, saving lives, and decreasing healthcare spending. Although the results from this project are not generalizable, they demonstrate that modifications in care delivery such as the embedment of an EHR C-SSRS could improve patient outcomes. Evidence-based research has shown the many benefits of using technology to optimize patients' care delivery. It is about time nursing leaders and healthcare organizations take heed. With the implementation of an EBP tool, routine staff training, and professional collaboration, healthcare organizations can improve the care transitions of individuals with suicide risk and decrease the rates of suicide.

Funding

There was no funding or monetary compensation paid to anyone for this quality improvement project.

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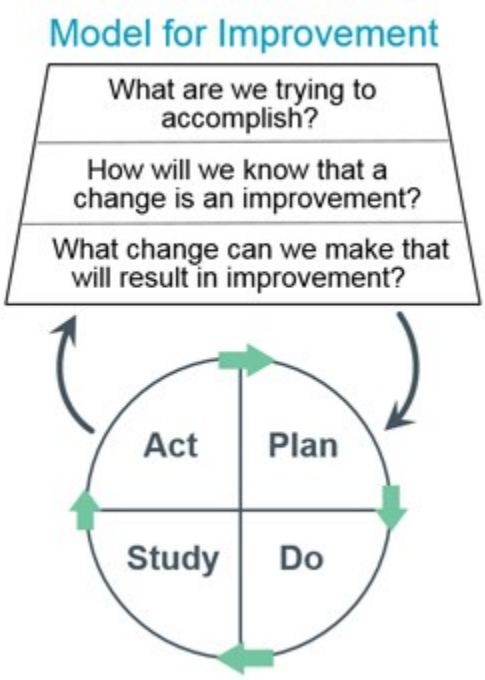
Appendix A

PDSA Cycle



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Appendix B

Columbia Suicide Severity Screening Rating (C-SSRS)

	Past month	
	YES	**NO**
1) ***Have you wished you were dead or wished you could go to sleep and not wake up?***		
2) ***Have you actually had any thoughts of killing yourself?***		
If YES to 2, ask questions 3, 4, 5, and 6. If NO to 2, go directly to question 6.		
3) ***Have you been thinking about how you might do this?*** E.g. "*I thought about taking an overdose, but I never made a specific plan as to when where or how I would actually do it….and I would never go through with it.*"		
4) ***Have you had these thoughts and had some intention of acting on them?*** As opposed to "*I have the thoughts, but I definitely will not do anything about them*."		
5) ***Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?***		
6) ***Have you ever done anything, started to do anything, or prepared to do anything to end your life?*** Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc. **If YES, ask:** ***Was this within the past three months?***	**YES**	**NO**

Low Risk Moderate Risk High Risk

The Columbia lighthouse project (2016). https://cssrs.Columbia.edu

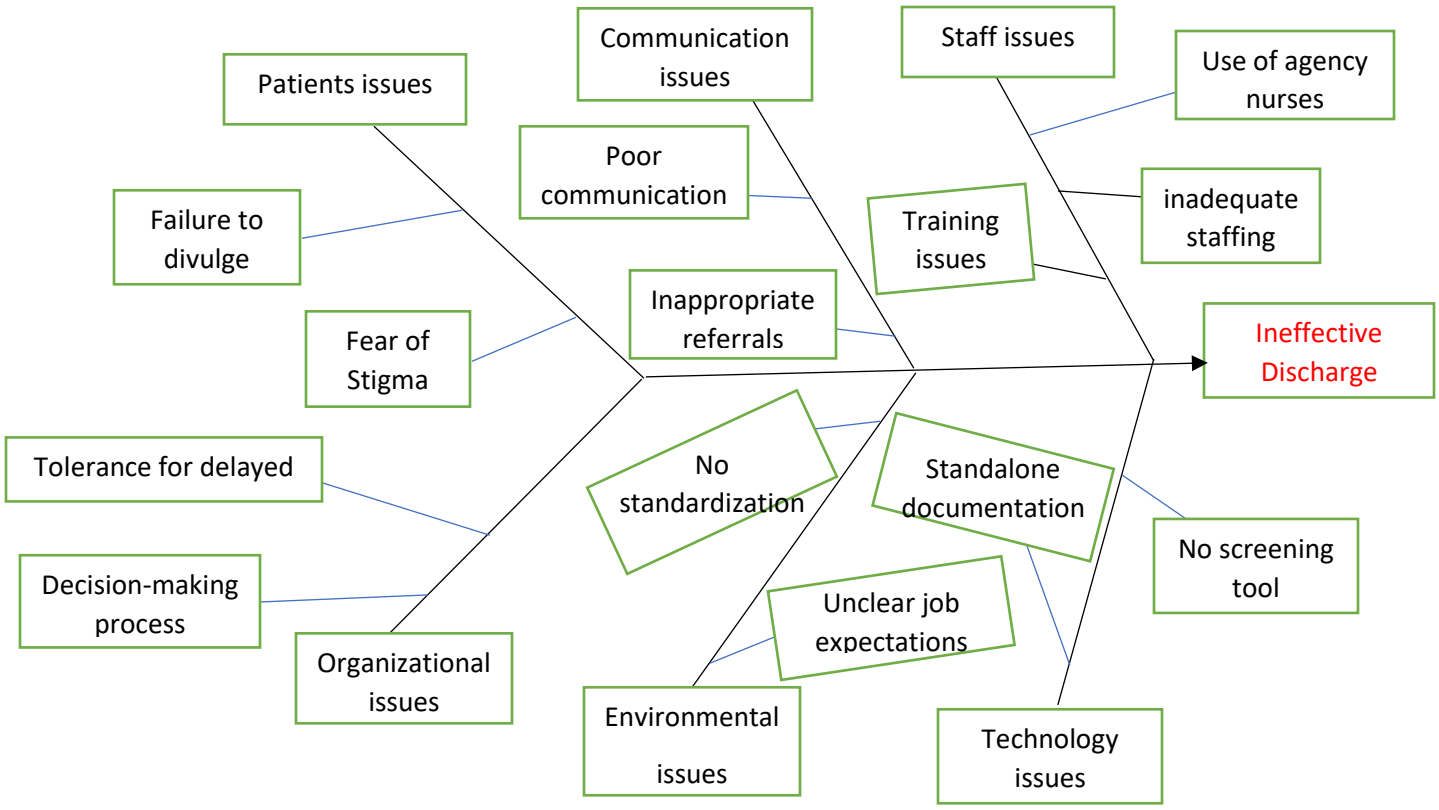
Appendix C

SIPOC Diagram: Evaluation of Current Nursing Discharge Process

SUPPLIERS	INPUT- products and services delivered by suppliers	PROCESS - steps in discharge process	OUTPUT - products and services delivered to patients at discharge	CUSTOMER - key Internal and external customers
• ER • EMS • Community Hospitals • Direct admission from home /family • Intra-facility/unit transfers	Patients- • Failure to divulge • Fear of stigma	• Nursing discharges patients and completes nursing discharge summary note • No assessment or, documentation of level of suicide risk & care transition • No EHR suicide risk assessment template • Fragmented communication about care transition process • No nursing specific suicide training	• Discharge medications with instructions • No suicide risk assessment • No care transition or referral process • Poor communication	• Patients • Families • Community-mental health providers and clinics

Appendix D

Fishbone Diagram (Root Cause Analysis)



Appendix E

Pre-and Post-Survey on Nurses Skills, Knowledge, and Self-efficacy

#	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I feel capable of providing care to individuals who attempted suicide or at risk for suicide					
2	I have professional skills to assess individuals at risk for self-harm.					
3	I am capable of identifying warning signs of suicide in an individual under my care.					
4	I feel confident discharging individuals at risk for suicide.					
5	I feel suicide risk assessment is part of my job responsibilities					
6	I know how to intervene when confronted with a potentially suicidal individual.					
7	Assessment of individuals with suicide risks should be done on all health care units					
8	Talking about suicide will remind individuals at risk about suicide and encourage them to attempt suicide					
9	I have received adequate training					

	from my organization on the management of patients with suicide risks					
10	I know exactly what is expected of me when discharging patients with suicide risks					

Comments:

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_____

Appendix F

Comparison Results of Pre and Post Survey Questionnaires

Pre-Survey	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Mean Score
% Response	47	67	67	53	53	47	47	40	30	20	47.1
Post-Survey	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Mean Score
% Response	87	80	87	87	100	80	93	93	93	100	90

Appendix G

Check/Tally Sheet Tool for Data Collection at 30-days Post-Intervention

Dates	Total Number of discharges	C-SSRS completed	# of C-SSRS not completed	% compliance	% Non-compliance
2/22/21	1	1	0	100	
2/23/21	~~1111~~ 1	6	0	100	
2/24/12	~~1111~~ 1	5	1	83	17
2/25/21	~~1111~~ 111	7	1	88	12
2/26/21	~~1111~~ 111	8	0	100	
2/27/21	1	1	0	100	
2/28/21	1	1	0	100	
3/1/21	111	3	0	100	
3/2/21	111	2	1	67	33
3/3/21	111	3	0	100	
3/4/21	11	2	0	100	
3/5/21	1	1	0	100	
3/6/21	11	1	1	50	50
3/7/21	0	No discharge			
3/8/21	111	2	1	67	33
3/9/21	1	1	0	100	
3/10/21	111	3	0	100	
3/11/21	11	2	0	100	
3/12/21	11	1	1	50	50
3/13/21	11	1	1	50	50
3/14/21	1	1	0	100	
3/15/21	111	2	1	67	33
3/16/21	1111	4	0	100	
3/17/21	1	1	0	100	
3/18/21	~~1111~~	5	0	100	
3/19/21	111	2	1	67	33
3/20/21	111	3	0	100	
3/21/21	1	1	0	100	
3/22/20	111	3	0	100	
3/23/21	1111	3	1	75	12
Totals	**88**	**78**	**10**	**87%**	**13%**