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Unrecognized suicidal ideation in ED patients: are we missing an opportunity?

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Abstract

Objective—To determine if patients who disclosed suicidal ideation during a health risk survey had their mental health symptoms documented by physicians and were given mental health referrals and to evaluate how many of these patients subsequently attempted suicide.

Methods—As part of a larger survey, patients responded to questions on a computer kiosk about general health risk behaviors and mental health symptoms. Fifteen months after initiating the survey, we reviewed medical records on those patients who had disclosed suicidal ideation. A standardized abstraction sheet was used to collect data regarding the ED diagnosis at the time of enrollment, physician documentation of suicidal ideation, and referral to psychiatric services, as well as subsequent ED and clinic visits and suicide attempts.

Results—Of the 165 patients who disclosed suicidal ideation on the computer survey, 118 charts (72%) were available. During the index ED visit, only 25% of patients had suicidal ideation or other mental health issues noted on the chart. The majority of patients (76%) were discharged home, 10% were transferred to psychiatric services, and 3% were admitted for medical reasons. Although 72 patients had no future visits to the ED or other hospital-affiliated clinics, 39% of patients had at least one subsequent visit to the ED, and 17% had at least one visit to the psychiatric services. Four patients attempted suicide following their initial index visit to the ED.

Conclusion—Suicidal ideation was self disclosed frequently by waiting room patients in our urban ED and patients who disclosed suicidal ideation did not always receive referrals for mental health services.

Keywords

suicidal ideation; screening; emergency department; kiosk

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Introduction

Suicide continues to be a significant cause of mortality in the United States, representing a tragic loss of human life as well as billions of dollars in productivity losses and medical costs (1). In 2002, suicide claimed 31,655 lives in the US, with firearms accounting for the majority of lethal self-inflicted injuries (2). Because patients with self-inflicted injuries often present acutely and require medical treatment, emergency departments (EDs) often treat these patients. The National Hospital Ambulatory Medical Care Survey reported that self-inflicted injuries accounted for 438,000 visits to US emergency departments in 2003 (3). In addition, Gairin et al. reported that many suicide victims had contact with ED services in the year prior to their attempt (4). Thus, ED physicians serve as an important contact point with suicidal patients and can potentially intervene with suicidal patients, perhaps preventing needless deaths.

Although screening for depression in the primary healthcare setting is generally regarded as safe, there has been conflicting evidence on its efficacy in improving patient mental health care (5,6). Furthermore, there has been limited research on screening for suicide in the primary healthcare or ED setting. Suicidal ideation has been identified as an important precursor of both attempted and completed suicide (7) and it is associated with a six-fold increase in suicide attempts (8). However, there is a paucity of literature on the sensitivity and specificity of available screening tools, as well as a lack of information on the clinical impact on patient's health outcome if these screening tools are used in the primary healthcare setting (9).

This study focuses on the prevalence of suicidal ideation among waiting room patients in an inner-city ED and the clinical outcome of their visits. The purpose of this study was to determine if ED patients who disclosed suicide ideation during a health risk survey had the presence of mental health symptoms documented on their chart and were given referrals to mental health services. We also reviewed how many ED patients with suicidal ideation subsequently attempted suicide or used health care services after their index ED visit.

Methods

Selection of Participants and Setting

The study was conducted in an ED waiting room of a university affiliated, inner-city hospital. The majority of patients seen in the ED are medically indigent and African American. Total patient volume in the ED is approximately 110,000 patients per year. The university institutional review board and the hospital research oversight committee approved this study as part of a larger study on intimate partner violence and mental health issues.

All patients between the ages of 18 and 55 who were able to speak and read English at a 5th grade level, were not visibly intoxicated or acutely psychotic, and were willing to stand for 20 minutes in order to complete the study were eligible for participation. Patients brought in by ambulance or those patients whom the triage nurse deemed to be seriously ill were brought back directly to the treatment areas and thus were not eligible for our study conducted in the waiting room. Trained research assistants approached all patients fitting inclusion criteria during study hours and asked if they would be interested in participating in a general health survey. Study times were selected to represent peak patient hours (11 am to 7 pm three days per week). All patients who were interested in participating were then taken to a semi-private booth in the waiting room where research assistants explained the study to the patients and obtained informed consent. Patients were specifically informed that a physician would be notified if they disclosed any thoughts of harming themselves or someone else.

Data Collection and Processing

Patients answered survey questions relating to general health risk behaviors and mental health symptoms including suicidality on a touch screen computer kiosk. All patients received a targeted list of community resources based on which health risk behaviors they disclosed. Patients stopped the survey during the computer screening process if they were called to see the physician, if they became too sick, or if they chose to stop the screening. Research assistants received a notification printout if the patient disclosed suicidal ideation. The research assistants then immediately referred the patient to the triage nurse in the ED for medical clearance by a physician and then transferred to psychiatric emergency services, when appropriate. This comprised the population for this chart review study.

Suicidal Ideation

The Beck Scale for Suicide Ideation (BSS) (10) was used to assess suicidality. The BSS is a 21-item validated scale with 5 initial screening questions used to measure suicidal intent. The screening items assess a participant's wish to live or die and the strength of the desire to commit suicide. If a participant states that they have any desire to commit suicide on the initial screening, they then answer the remainder of the scale. Responses are scored on a three-point scale and a total score is calculated. The total score is then compared to established cut points. A score of 11 or greater yielded a positive screen for suicidal ideation (11). The BSS has high internal consistency of 0.89 and an inter-rater reliability of 0.83 (10).

Other measures

The Beck Depression Inventory-II (BDI-II) was used to screen for depressive symptoms (12). A score of greater than or equal to 20 was a positive screen for moderate/severe depressive symptoms. It has a classification rate of 88% (sensitivity 71%, specificity 88%) (12). Part 3 of the Posttraumatic Stress Diagnostic scale (PDS) (13) was used to measure a patient's level of posttraumatic stress. A score of 21 or higher resulted in a positive screen for moderate/severe PTSD symptoms. It has a classification rate of 74% (sensitivity 89%, specificity 65%) (24).

Substance use was assessed using several tools. To assess alcohol abuse the CAGE screener for alcoholism was used (14). A score of 2 or more is considered to be indicative for probable alcoholism (15). Sensitivity and specificity scores range from 60% to 95% and 40% to 95% respectively (16). Drug use was assessed by one question, whether the respondent had used any street drugs in the past 4 weeks, a positive response indicated a possible drug abuse problem. Cigarette smoking was assessed by asking if the respondent currently smoked cigarettes.

Data Collection of Patients who self-reported Suicidal Ideation

After 15 months of screening patients on computer kiosks, we reviewed the medical records of subjects who screened positive for suicidal ideation during their index ED visits. We retrospectively reviewed the medical records for up to six months after the index ED visit for patients who screened positive for suicidal ideation. The medical records reviewed encompassed all patient contacts within the university healthcare system, including the hospital where screening was conducted as well as affiliated clinics and mental health services. Every effort was made to locate the patient's medical record, with a minimum of two requests made to the hospital records department.

A standardized abstraction sheet was used to collect data regarding the ED discharge diagnosis during the index ED visit associated with the computer screening as well as provider documentation of suicidal ideation. For this study's purposes, any comments in the "Notes" section regarding mental health symptoms or a "Yes" marked under the Review of

Systems question “Psych- Depressed, suicidal, change in behavior” within the standardized ED patient chart constituted physician documentation of mental health symptoms and/or suicidal ideations. Furthermore, information on the patient’s outcome, including referral to psychiatric services and the prescription of medications relevant to mental health disorders was abstracted. ED and clinic visits subsequent to the enrollment visit were also recorded, along with information about subsequent mental health diagnoses, prescriptions for psychiatric symptoms, and suicide attempts.

A random sample of 14 charts was abstracted by two independent reviewers to determine inter-rater reliability. A kappa of .786 was found thus suggesting that the standardized abstraction sheet was useful in gathering information accurately about a patient’s health care utilization.

Results

2883 subjects completed the computer screen and a total of 165 patients screened positive for suicidal ideation (score of ≥ 11 on the BSS), thus the prevalence of suicidal ideation in our sample was 5.7%. Of these 165 patients who self-reported suicidal ideation, 118 charts were available for abstraction. All of the following analysis is for the 118 abstracted charts.

The majority of participants were African American (85%) and male (53%). Almost all (96%) of the patients with suicidal ideations also had moderate to severe depressive symptoms and over one-third had moderate to severe PTSD symptoms. Many of the 118 patients also had substance use issues. 38% had used a street drug in the past four weeks and 65% had alcohol problems, signified by a score of ≥ 2 on the CAGE alcohol screener. See Table for more detailed demographic information.

Pain was the most common chief complaint (n=52) for presentation to the ED. In addition, two patients presented with a chief complaint related to mental health symptoms, specifically depression and schizophrenia. Seventy-seven patients were discharged from the ED with a variety of diagnoses, again the most common being “pain” and were not deemed to have serious psychiatric issues. Two patients were admitted to the hospital for other medical issues, and the outcome of the initial visit was unable to be determined for two patients. Of the eleven patients sent to psychiatric emergency services, three patients were kept for more than a day in psychiatric emergency services and then were discharged with to a shelter or home. Only 25% of patients had suicidal ideation or other mental health issues noted on the chart.

After the index ED visit, 48 patients had no other visits to the ED or other hospital-affiliated clinics during the follow up period. Twenty-one patients had at least one visit to the Hospital Psychiatric Services. 46 patients had at least one subsequent visit to the ED with 4 patients returning with suicide attempts.

Discussion

We found a suicidal ideation rate of 5.7%, which is higher than national estimates of 3.3% (17). However, the ED population differs from the general US population as EDs treat patients with mental health issues, substance abuse problems, and other issues associated with suicidality. In addition, the population in this study consisted of waiting room patients, with presumably less urgent symptoms. A similar computerized mental health screening program at Parkland Memorial Hospital ED found an even higher frequency of suicidal ideation (18). Claassen and Larkin reported a prevalence of 11.6% for suicidal ideation in their patient population, with 2% of ED patients reporting a plan to kill themselves. It is possible that patients are more likely to disclose suicidal ideation to health care providers (as

opposed to surveyors via telephone) or that the computerized format provides a non-judgmental environment conducive to disclosure of mental health concerns. The idea that computerized screening may produce more candid patient responses is an intriguing possibility that merits further study.

Our data suggests that physicians in the ED are missing an opportunity for intervention with suicidal patients. 118 patients self-reported suicidal ideation, yet only one-fourth had any notes relevant to their mental health documented on their charts despite using lenient criterion for evidence of the physician's documentation of suicidality (i.e. checking a box marked "Yes" for "Psych- Depressed, suicidal, change in behavior" on a standardized chart). In addition, only 11 patients were referred to psychiatric services. We only reviewed what was written in medical charts so it is very possible that all patients who were not referred to psychiatric services had undergone a physician evaluation and were felt not to be imminently suicidal. Despite this possibility, the underutilization of psychiatric referrals is alarming because four patients later attempted suicide. Fortunately, their attempts were unsuccessful, but it does highlight the need for intervention amongst this population. In addition, the attending physician and/or triage nurse was notified each time, but it is also possible that the information about the patient did not always get passed onto the treating physician. Again, a provider may have evaluated the patient and determined that the patient was not actively suicidal, but we could not find documentation of this on the chart.

The chief complaints of patients with suicidal ideation infrequently pertained to their mental health: only 3 of 98 patients on their index visit initially stated their need for mental health treatment. Of the five patients who later received a mental health diagnosis, none were diagnosed with a mental health chief complaint at their ED index visit. Similarly, of the four patients with suicidal ideation who later attempted suicide, none of them had presented with a mental health chief complaint at triage when enrolled in the computer survey, although one of them was discharged from the ED with a diagnosis of depression. This suggests that patients who have suicidal ideations may visit the ED and not disclose this information unless prompted. Furthermore, the majority of our patients did not seek outpatient mental health counseling through the hospital's psychiatric services, and they were unlikely to register a chief complaint related to their mental health at later ED visits or non-mental health clinics. Only six chief complaints related to mental health were registered in the 130 clinic visits, and only four mental health chief complaints occurred in 89 ED visits following the index visit. Thus, it appears that although many patients are willing to disclose suicidal ideation, they unfortunately are not seeking treatment for their mental health symptoms. This increases the need for health care providers to screen for suicidal ideation and emphasizes the importance of mental health counseling in patients with an increased risk for suicide.

Many barriers exist to ED physician assessment of suicidal ideation including lack of time and minimal training in mental health. One recently voiced concern is that the ED is an inappropriate location for mental health screening and would be best left to primary care physicians (19). Although the ED may not provide an environment appropriate for extensive mental health counseling, it does serve as an important contact point with suicidal patients. Furthermore, our study suggests that patients are willing to reveal their suicidal ideations in this setting. Also, given that the majority of patients with suicidal ideation in our study did not seek mental health services, even after being screened and provided with resources, the prevention of suicide requires a coordinated effort between all healthcare providers.

This study was conducted at a single inner city ED in the southeast. Thus, EDs in other geographic settings or those that are not academically affiliated may have different patient populations. In addition, this was a select group of stable, nonurgent patients, who by

discharge diagnoses had a high preponderance of pain issues and were willing to spend 20 minutes on this study. Although the triage nurse and in most cases, the attending physician, were notified about patients with suicidal ideation, this information may not have been passed onto treating physicians in every case. In addition, we found that documentation on patient's charts of mental health issues was lacking however whether this was due to lack of screening or lack of notating is not known. Our retrospective chart review may have missed verbal discussions between the physician and patient that were not subsequently documented. Similarly, any phone consultations with psychiatry, if not documented, may have been missed. Patients may have sought follow up care outside our hospital and clinic system and we did not have access to medical records outside our system. Finally, we used a validated tool to screen for suicidal ideation but this does not substitute for physician evaluation or a structured psychiatric interview to confirm suicidality.

In conclusion, suicidal ideation was common in patients who presented to the waiting room of our urban ED. Physicians underdocumented mental health symptoms on the medical chart and did not always refer patients for mental health services.

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Table 1

Table Demographics

N= 118	
Gender	
Male	52.5% (62/118)
Female	47.5 (56/118)
Age (mean)	38.19
Race	
African American	84.7% (100/118)
White	12.7% (15/118)
Hispanic	.8% (1/118)
Other	1.7% (2/118)
Education	
Less than ninth grade	9.7 % (11/118)
Some/Completed high school	61.9% (70/118)
Some/Completed College	28.3% (32/118)
Marital Status	
Single	66.4% (75/118)
Separated/Divorced	25.7% (29/118)
Widowed	.8% (1/118)
Married	7.1% (8/118)
Employed	28.1% (32/118)
Health Insurance	
None	75.7% (84/118)
Medicaid/Medicare	18.9% (21/118)
Private	2.7% (3/118)
Mental health symptoms	
Depression	95.8% (113/118)
PTSD	38.1% (45/118)
Substance use	
Alcohol abuse (CAGE 2)	65.2% (45/118)
Drug use	38.3% (44/118)
Cigarette smoking	70.4% (81/118)