Risk Factors for Return Emergency Department Visits Among Patients Presenting with Psychiatric Complaints

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Citation

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Abstract

Background: Psychiatric visits present a challenge for the emergency physician, both in determining appropriate disposition of patients and in assuring appropriate outpatient follow up for discharged patients. Aims: We attempted to determine which factors among psychiatric patients may predict return visit by comparing repeat emergency department (ED) visits and subsequent inpatient admission among psychiatric patients who are discharged from the ED.Methods: We reviewed the charts of all ED patients evaluated for psychiatric complaints between January-February 2007. We then reviewed discharged patients' records and documented whether the patient returned to the ED within 30 days, and whether the patient was admitted to a psychiatric unit at that time. Results: 92 patients presented during the study period expressing suicidal ideations or having attempted suicide vs. 142 patients with non-suicidal psychiatric complaints. 31.5% of suicidal patients versus 20.4% of non-suicidal patients were admitted to an inpatient psychiatric facility at the time of their initial presentation to the ED (p<.001). Of the patients who were discharged, 17.5% (11/63) of the suicidal patients and 23% (26/113) of the non-suicidal patients returned to the ED within 30 days with psychiatric complaints (p=0.386). In multivariate analysis, significant predictors of return ED visit among psychiatric patients included not having a caregiver available at the time of discharge and history of a previous suicide attempt. There were no completed suicides among study patients. Conclusions: Lack of available caregiver at the time of discharge and history of prior suicide attempt were the primary risk factors for repeat ED visits for suicidal patients. These results may provide guidance for potential intervention in patients at higher risk for return ED visit.

INTRODUCTION

Suicidality is a dilemma of recidivism.[1,2] A previous suicide attempt is the leading risk factor for a completed suicide[3-6] and the attempted-to-complete suicide ratio is approximately 8:1.[7] Furthermore, for every completed suicide, 22 people come to the ED following an attempt.[8] In women, the risk of future suicide acts is increased six-fold for prior suicide attempters and each past attempt increases the future risk three-fold.[9] Each suicide attempt which does not result in a completion provides an opportunity for prevention and EDs are in the optimal position to take advantage of these opportunities. Prevention begins with correct disposition decisions, which rely on accurate initial assessments of suicidality and risk for repeat behavior. Immediate return visits may indicate that previous discharge plans were not appropriate. EDs can take advantage of opportunities for secondary suicide prevention and reduce return rates by appropriately assessing suicidal patients in the ED for admission versus outpatient follow-up.

Understanding the characteristics of repeat suicide attempters can help to identify those who can accurately assess suicidal patients. A strong link exists between psychiatric illness and suicide.[10-11] Thirty-eight percent of psychiatric ED patients demonstrate suicidal behavior [10] and 98% of suicidal victims have a diagnosis of at least one mental disorder on psychological autopsy.[11] This co-morbidity data supports the recommendations of the American Psychiatric Association (APA) "Practice Guidelines for the Assessment and Treatment of Patients with Suicidal Behavior" that psychiatric professionals conduct the assessments of suicidal ED patients.[12] Licensed Clinical Social Workers (LCSW) at the University of Utah are Licensed Mental Health Therapists who are trained to evaluate, diagnose, and offer treatment recommendation for psychiatric patients. Per institutional

protocol at the University of Utah, LCSWs evaluate patients presenting with psychiatric complaints after initial evaluation by the ED physician.

The objective of this study was to determine which patient characteristics predict repeat ED visit among those presenting with psychiatric complaints.

METHODS

This study was conducted at the University of Utah Medical Center, the primary medical facility of the University of Utah medical educational system and a unique research environment due to its expansive geographic catchment area, which includes eastern Nevada, Western Wyoming, Montana, Idaho, and all of Utah. The ED in which this study was conducted matriculates >35,000 visits per year. It serves as the primary screening site for admission to the region's largest psychiatric facility, which has 90 inpatient beds and approximately 3000 inpatient visits per year, as well as the University of Utah's inpatient psychiatric unit. Due to this agreement, the University of Utah ED screens the majority of psychiatric and suicidal patients in the Salt Lake Valley. The study was conducted through a retrospective chart review using the University of Utah's medical electronic database. The study received University of Utah Institutional Review Board approval on January 28, 2008.

In an effort to more thoroughly evaluate psychiatric patients presenting to the University of Utah Hospital ED, LCSWs evaluate patients and complete a crisis note detailing their assessment and recommendations for admission versus discharge following the initial evaluation by an ED physician. Detailed crisis notes follow a template format and also include patient age, gender, presentation, history of suicide attempts, psychiatric history, living situation, and current sources of stress in the patient's life. All patient disposition decisions (admission vs. discharge) are made by the attending emergency physician in discussion with the LCSW . Emergency department LCSWs follow up on discharged patients through hospital records and community psychiatric facility records, and data regarding completed suicides among patients was obtained from these follow-up records.

All patients who presented to the emergency department between January and February 2007 and were evaluated by a crisis worker during their visit were included in the study. We reviewed the crisis notes, discharge paperwork and ED physician notes of all ED patients evaluated by a LCSW during the study period. Reasons for evaluation by a LCSW included suicidal ideation, suicide attempt, psychosis, substance abuse, or any other psychiatric complaints for which the attending ED physician requested an evaluation. In cases in which a patient visited the ED multiple times during the study period, the initial visit during this period was considered the index visit, and additional visits were evaluated as repeat visits.

We categorized each patient's reason for evaluation as either suicidal or non-suicidal psychiatric. The former category subsumed suicidal ideation or suicidal attempts and gestures, while the latter category included psychosis, substance abuse, and any other presenting complaints of a psychiatric nature. The final outcomes measured were hospital admission during the initial ED visit, return ED visit within 30 days for a psychiatric complaint, and admission to inpatient psychiatric facility upon return ED visit within 30 days. Patients were not considered to have had a return ED visit within 30 days if the patient presented to the ED with a medical complaint and was not evaluated by a LCSW.

Additional factors recorded from the documented patient evaluation included: patient gender, suicide attempt, suicide plan, history of previous suicide attempt, whether a caregiver was available at the time of discharge, and whether the patient had been evaluated by a crisis worker in the previous two years. Previous suicide attempt, suicide plan, and current suicide attempt were recorded based on the information gathered from the LCSWs evaluation and assessment. Whether a caregiver was available for discharge was documented if the LCSWs reported that an individual (generally a family member or friend) would assume care of the patient upon discharge.

Fourth year medical students all of whom had completed a psychiatry rotation and were familiar with the emergency department LCSW notes performed the chart review. The investigators entered data into a standardized database. A QA of 20% of the reviewed charts was performed by one of the study's primary investigators (AZ).

We first evaluated whether the nature of the patient's psychiatric complaint (suicidal vs. non-suicidal) predicted admission. We then evaluated predictors of return emergency department visit within 30 days as well as hospital admission upon repeat visit within 30 days. Statistical analysis was performed using chi-square and multivariate regression analysis (SPSS v. 16.0), with $p<0.05$

considered statistically significant.

RESULTS

234 patients presented to the University of Utah Hospital Emergency Department during the study period with a chief complaint of a psychiatric nature and were evaluated by a LCSW. Of these 234 patients, 92 patients expressed suicidal ideation or confirmed having recently attempted suicide while 142 patients presented with non-suicidal psychiatric complaints. Suicidal patients were younger and predominantly female. They were more likely to have had a previous ED visit with a LCSW evaluation in the preceding two years, to have had a previous psychiatric admission, and to have had a previous suicide attempt, when compared to non-suicidal patients. [Table 1]

Figure 1

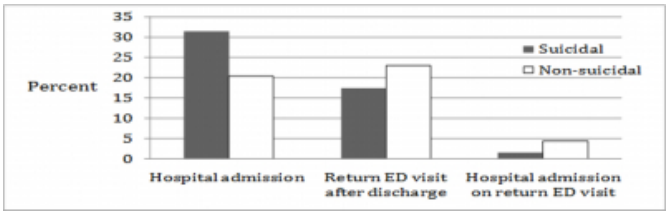
Table 1: Baseline characteristics, Suicidal vs. Non-suicidal patients

	Suicidal	Non-suicidal	P-value
Age	35.6 y	39.7 y	0.031
Gender (female)	51%	49.3	<0.001
ED visit in past 2 years	36.9%	35.9%	<0.001
Previous psychiatric admission	41.3%	32.4%	<0.001
Previous suicide attempt	28.3%	9.2%	<0.001

31.5% (29/92) of suicidal patients versus 20.4% (29/142) of non-suicidal patients were admitted to an inpatient psychiatric facility at the time of their initial presentation to the ED (p<0.001). None of the discharged patients had a completed suicide attempt during the 30-day follow-up period. Of the patients who were discharged, 17.5% of the suicidal patients (11/63) and 23% of the non-suicidal patients (26/113) returned to the ED within 30 days with psychiatric complaints (p=0.386).[Figure 1]

Figure 2

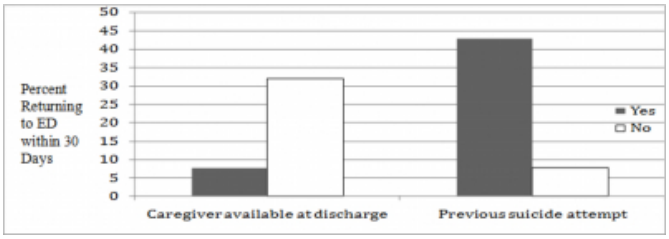
Figure 1: Outcomes, Suicidal vs. Non-suicidal patients



We evaluated whether LCSW documentation that the patient had a caregiver available at the time of discharge predicted return ED visit. 32% (31/97) of patients who did not have a caregiver available at the time of discharge returned to the emergency department within 30 days vs. 7.7% (6/78) of patients who were documented as being discharged to the care of an individual (p<0.001). Additionally, we found that LCSW documentation of a previous suicide attempt by the patient predicted return emergency department visit: 42.9% (9/21) of patients who reported a suicide attempt returned to the emergency department vs. 7.7% (6/78) of patients who did not report a previous suicide attempt (p<0.001). [Figure 2]

Figure 3

Figure 2: Predictors of Return ED Visit



We performed multivariate analysis controlling for eight variables, including the nature of the visit (suicidal vs. non-suicidal psychiatric complaint), gender, crisis evaluation in the previous 2 years, previous psychiatric admission, suicide attempt, suicide plan, previous suicide attempt, and whether a caregiver was available for discharge. Significant predictors of return emergency department visit included not having a caregiver available at the time of discharge (p<0.001) and previous suicide attempt (p=0.005).

One suicidal and five non-suicidal patients were admitted upon return emergency department visit within the next 30 days (9.1% suicidal vs. 19.2% of non-suicidal patients returning, p=0.444). In multivariate analysis controlling for the eight variables listed previously there were no significant predictors of hospital admission upon repeat ED visit within 30 days.

DISCUSSION

Our research found that predictors of return ED visit within 30 days, after screening and discharge by a LCSW, included not having a caregiver available at the time of discharge, and a history of a previous suicide attempt. These findings may have future implications for further research in this area, and for more aggressive intervention with these patients. The study found that patients discharged without a caregiver were admitted at higher rates. This finding was significant in multivariate analysis, and may suggest these patients would be better served through a more aggressive search for a caregiver at the time of discharge, and further research in this area may wish to focus on the efficacy of this intervention.

EDs vary widely in their practices for requesting psychiatric consultations when evaluating suicidal patients.[13] An institution's consult protocol is the most important factor in this decision [14] with a focus on specific characteristics of patients which are proven risk factors for repeat behavior being second in importance. Unfortunately, these variations mean that all too often suicidal patients do not receive a psychiatric assessment.[15-17] Several studies have reported that only about 59% of self-harm patients receive a psychiatric assessment.[15,18,19] Several factors which increase the risk of being discharged without a psychiatric assessment include: male gender, use of drugs or alcohol, age between 20-34, and presentation at a time of low staffing.[15,19] Alarmingly, many of these characteristics are risk factors for repeat attempts and/or eventual completion.[20-24]

This research reinforces the problem of frequent repeat visits for psychiatric patients. The high rate of return among suicidal and non-suicidal psychiatric patients suggests that much work is needed in terms of facilitating appropriate outpatient follow-up to reduce return visits. Past studies have highlighted the urgency of this problem by connecting excess mortality rates with recidivism.[5,25] In a five year follow-up study by Ostamo A and Lönnqvist J, completed suicide was the cause of excess mortality in 37% of female deaths and 44% of male deaths among suicidal emergency patients. [25] The risk of completed suicide is particularly high during the first year following an attempt,[6,25] suggesting that immediate repeat visits must be handled with a heightened sense of caution and attention to the accuracy of assessment. Further analysis is needed to better characterize patients who return to the ED, require admission on repeat visit, or continue to demonstrate self-harm behavior upon discharge.

LIMITATIONS

The limitations of this study are those limitations that are common among all studies with a retrospective chart review design. The accuracy of the records may have been compromised by the author of the records, the interpretation of the reader or any of the intervening steps. Furthermore, the study included only records at the University of Utah despite the fact that other hospitals with emergency departments exist in the area and may have been alternate sites of treatment and assessment by the participants in the study. This fact carries relevance especially for the outcome measures of this study as repeat ED visit and hospitalization referred only to patients returning to the University of Utah. The assessment of repeat visits was determined by the availability of LCSW notes or ED physician notes rather than a hospital consensus database which may be more accurate, however all psychiatric patients presenting to the University of Utah are first evaluated in the ED, making this a fairly accurate screen. A limitation of this study is that the diagnosis of mental disorders was made by the clinical judgment of the attending physician rather than by the utilization of a standardized diagnostic tool. Lastly, the findings of this study may be limited by variances in health care personnel among differing institutions.

CONCLUSION

Suicide is a disease of recidivism, and this property makes it amenable to prevention. Prevention begins with correct disposition decisions, which rely on accurate initial assessments of suicidality and risk for repeat behavior. Immediate return visits may indicate that previous discharge plans were not appropriate. We have identified that the lack of a caregiver at discharge and prior suicide attempt are two important risk factors for return visits that can be more appropriately addressed in the ED. These findings may suggest potential risk factors for return ED visit and a heightened effort to improve outpatient follow up measures among these patients.

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