

Effectiveness of a 24-Hour Crisis Unit in Stabilization of Psychiatric Patient's Disposition and Return Rates

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Abstract

Introduction: The primary objective of this study is to determine if the crisis intervention (CSU) at an urban 24-hour Crisis Stabilization Unit (CSU) is effective in stabilization of psychiatric patient's acute symptoms and avoidance of boarding and psychiatric hospitalization.

Method: A retrospective random sample chart review of all psychiatric patients who receive a medical clearance from Emergency Department (ED) who were sent to an urban 24-hour CSU will be included in the study. The determination of boarding for each patient will be done by finding the difference in time from initial ED and CSU. Each patient will be tracked to determine whether they were discharged or admitted to inpatient psychiatric services. Examine outcomes as they relate to inpatient hospitalizations, return time to CSU or inpatient, cost for psychiatric related illness. Additional demographic information will also be collected; such as age, type of mental illness, ED triage rating, payment method, diagnosis, and treatment (inpatient and outpatient). The information will be analyzed using SPSS 22.0 for statistical analysis. This study was IRB approved.

Results: A total of 200 patients were included in the study. A portion of patients 34% (69) were sent home with self care instructions after their stay in PES. However, 65% (131) of the patients, were admitted to psychiatric units after their stay in CSU. There was a no significant difference in return visit to the ED for patients who were in CSU and then sent home as compared to those who were admitted for inpatient. However that is only true for the 30 day period. Of the patients initially treated by CSU but were sent home only 11% (18) came back to the ED in 30 days. Patients initially treated by CSU for psychiatric illness who were admitted back into inpatient after 30 days at 16% (22). Those who were admitted came back in 90 days at 48% (63) as compared to those who were sent home who overwhelmingly came back at 96% (67) within the same 90 day period.

Conclusions: The impact of PES of non boarding or admitting psychiatric patients was seen for a third of the patients who went to it. There was however, no significant difference in admitted or non admitted patient's with regards to their 30 day returning rate to the ED. Both of these groups of patients had a lower return rate at 30 days after their time in CSU. Those patients who did not get admitted from the PES unit however, were more likely to return after 90 days than those who were admitted from the CSU unit. This could be an indication that PES has a limited impact on those patients who are not admitted.

OBJECTIVE OF STUDY

The purpose of this study is to determine if the crisis intervention is effective in stabilization of psychiatric patient's acute symptoms and avoidance of psychiatric hospitalization.

BACKGROUND

There is a growing number of patients seeking psychiatric care in hospital emergency departments (EDs) in the United State. Several studies have estimated that they make up between 6 to 9% of all

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ED visits (1-6). Many ED's have either limited onsite mental health services and or a small number of in patients beds for these patients. This has resulted in a nationwide trend of boarding of psychiatric patients, often for long periods. Studies have shown boarding can last for a minimum of 8 hours to an up to 34 hours (6-11). The impact of boarding is negative for the hospital and the patient with a cost on average of \$2,264 and patients who symptoms that have gotten worse not better during their boarding experience (9-12).

One innovative way to address this issue is to have a dedicated psychiatric Crisis Stabilization Unit (CSU) where patients are evaluated, receive intensive treatment, and are allowed time for observation and healing (typically, up to 24 hours is permitted onsite in these programs, which are considered to be outpatient services) (12-16). The goal is to stabilize patients and thus avoid hospitalization. This is done by the CSU, where patients receive intensive treatment with psychiatrists, nurses, and other affiliated personnel. The duration is for up to 24 hours onsite, with goals of rapid stabilization of the acute mental health crisis, and avoiding inpatient hospitalization (13-16).

The impact of this intervention has had limited amount of study to determine its effectiveness on both reducing boarding and hospitalizations and improving patient outcomes. Thus this study examined what if any impact a new Crisis Intervention dedicated CSU had on patient outcomes which included: time and amount of boarding, hospitalization rates, discharge, and re hospitalization rates for those patients who were sent to a Crisis Stabilization unit.

METHODS

This study took place an urban inner city hospital level I trauma center. It has 291 staffed beds and sees over 60,000 Emergency Department visit a year with 8% being for psychiatric complaints. The inclusion criteria was all psychiatric patients who came into ED the CSU for a psychiatric complaint either for observation and or who were admitted during 2015-2016. This included all psychiatric patients who received a medical clearance who were then sent to the crisis intervention unit. Once in the unit the determination of boarding time for each patient was done by finding the difference in time between discharge from the ED and time the initial call was made to the crisis

unit to request a transfer. Each patient was then tracked to determine whether they were discharged or admitted to inpatient psychiatric services from the crisis intervention. A retrospective chart review was also be done to see for 6 months prior and after the crisis intervention to examine outcomes as they relate to patients length of stay, boarding, inpatient hospitalizations, return time to ED for psychiatric related illness, cost of treatment, length of time of treatment, number of visits prior to and after the crisis intervention. Other factors examined were : age, sex, readmission within 3 days, 30 days and 90 days from initial visit, cost of treatment, insurance type, triage priority score, number of medications given in PES crisis units, arrival mode, if admitted length of say, and total number of hours in CSU crisis unit.

The goals of the CSU are as follows: prevention of unnecessary or inappropriate hospitalizations of persons experiencing acute or severe symptoms of a mental illness in distress. This was done with an assessment of patients via observation for no longer than 24 hours. This was done with a triage assessment upon arrival. This was done immediate to determine appropriate referral (outpatient treatment, inpatient, private therapist) if needed and if medication is needed immediately in current state. Then a secondary crisis assessment is done followed by a SAS (Screening, Assessment and Support) which is done by social worker or crisis worker to determine what if other social needs the patient has upon leaving the PES.

Additional demographic information was collected such as race, age, type of mental illness, ED triage rating, payment method, diagnosis, treatment (inpatient and outpatient), and existence of other co morbidities. The retrospective, random sampled chart review of all PES patients from 2015-2016 via Meditech had a total of 774 psychiatric patients who went to the PES from 2015 to 2016. Using random function these patients were then randomly selected in order to eliminate potential bias in the sample. A total of 200 patients were selected from the total.

The information was input into SPSS 22.0 for statistical analysis of descriptive and correlations. Due to the mixture of dichotomous and continuous variables, an ANOVA analysis was used in order to determine what, if any, difference there is between subjects with regards to impact the crisis unit intervention has

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had on patient outcomes as they relate to inpatient hospitalization, and usage of ED for return psychiatric related visits. This study was IRB approved.

RESULTS

A total of 200 patients were included in the study. They were overwhelmingly male 62% (126) and 36% (74) female. They were evenly divided between those 52% brought in by the fire department and 41% who walk in themselves to the ED. They had a relatively high ED priority level with 46% at level 2 and 44% at level 3. The primary of the patient population was Schizophrenia 19.4% and Bipolar 19.4% with Depression 14.6%. The majority at 50% were given between 1-3 medications with 25% given 4-6 and 25% between 6 to 9 medications during their stay in the CSU. Only 6% tested positive for drugs or alcohol with the majority testing positive for alcohol. Few other services such as self care education, housing, food assistance and or family education were given.

The disposition after 24 hours varied for psychiatric patient who initially went to CSU. A portion of patients 34% (69) were sent home with self care instructions after their stay in CSU. However, 65% (131) of the patients were admitted to psychiatric units after their stay in PES. The length of stay was 1 Day 76.1% (89) for patients that are being admitted. The length of stay in relationship to hours per time of visit in the PES was 9-20 hours 38.1% and 21-32 hours 35.2% for total amount of time spent in PES and being admitted. The length of stay for non admitted were 5-8 hours 44.9% is the average length of stay without being admitted to inpatient facility.

There was a non significant difference in return visit to the ED for patients who were in PES and then sent home as compared to those who were admitted for inpatient treatment however that is only true for the 30 day period. Of the patients initially treated by CSU but were sent home only 11% (18) came back to the ED in 30 days. Patients initially treated by CSU for psychiatric illness who were admitted back into inpatient after 30 days at 16% (22). Those who were admitted came back in 90 days at 48% (63) as compared to those who were sent home who overwhelmingly came back at 96% (67) within the same 90 day period.

DISCUSSION

The crisis intervention (CSU) unit at an urban 24-hour crisis unit was effective in stabilization, non boarding and or admitting of psychiatric patient as was shown in previous studies (11-15). This was demonstrated by 35% of the patients who were sent home. These individuals had a low return rate for a 30 day period. This however, was not the case when looking at the 90 day return rate which had 97% of them returning to the ED for the same psychiatric issues as the initial time they were sent to PES. This may show how that CSU was effective in helping in addressing a third of the psychiatric patient's issues. This did allow for an avoidance of boarding and psychiatric hospitalization for that portion of the psychiatric populations. The study however, shows that these efforts worked early on as measured by the 30 day return to ED rates. However they appeared, based on 90 day returning to the ED rates, to fade as time passes. Those patients who were admitted also showed the same impact with few of them coming back to the ED within the 30 day period. This was true for half of these patients at the 90 day mark with only 48% of them coming back for the same psychiatric issues. These numbers could have been impacted by the fact that at this CSU very few, less than 1% received additional services for other none psychiatric related issued. Both those who were sent home and those who were admitted might have issues with housing and food assistance that are exacerbated their condition (13-16).

LIMITATIONS

This was a retrospective study. It was done over a year long period which may have been a limited amount of study to determine its effectiveness on both reducing hospitalizations and improving patient outcomes. The CSU patient information only collected from one healthcare facility. Outcomes might have been different if a comparison was done between two different sites.

CONCLUSIONS

The impact of CSU of non boarding or admitting psychiatric patients was seen for a third of the patients who went to it. There was however, no significant difference in admitted or non admitted patient's with regards to their 30 day returning rate to the ED. Both of these groups of patients had a lower return rate at 30 days after their time in CSU. Those patients who did not get admitted from the CSU unit however,

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were more likely to return after 90 days than those who were admitted from the CSU unit. This could be an indication that CSU has a limited impact on those patients who are not admitted.

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Citation: La Vonne A. Downey, Leslie S. Zun, Amanda Hong. *Effectiveness of a 24-Hour Crisis Unit in Stabilization of Psychiatric Patient's Disposition and Return Rates. Archives of Emergency Medicine and Intensive Care.* 2018; 1(2): 30-33.

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