GAVIN PUBLISHERS

Emergency Medicine Investigations

Downey LVA, et al. Emerg Med Inves 2016: G117.
DOI: 10.29011/2475-5605.000017

Review Article

Return Emergency Department Visits and Readmissions of Psychiatric Patients versus Medical Patients

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Citation: Downey LVA, Zun LS, Hong A (2016) Return Emergency Department Visits and Readmissions of Psychiatric Patients versus Medical Patients. Emerg Med Inves 2016: G117. DOI: 10.29011/2475-5605.000017

Received Date: 31 October, 2016; **Accepted Date:** 9 November, 2016; **Published Date:** 17 November, 2016

Abstract

Background: Increasing Emergency Department (ED) readmission rates have become a concern. This is in part due to high cost of patient treatments resulting in more strain to ED resources. Several factors related to psychiatric patient visits to the ED are known. What is not understood is why those visits led to a high rate of readmissions. Medical patients also have a high readmission rate with a range of 15-20% within 30 days. Yet, it is unclear who they are and why they occur.

Objective: To determine if there are differences or similarities in readmitted ED visits between psychiatric and medical patients.

Methods : A retrospective, randomly sampled chart review of all ED psychiatric and medical patients who presented to an inner city, level one adult and pediatric trauma center with an ED revisit within 6-months from 2013-2015. A random sample of 300 medical and 300 psychiatric patients (600 total). The factors examined included: age, gender, race/ethnicity, visit date, visit reason, priority score, and length of stay, disposition, and visit charges. Data was analyzed using SPSS version 22 and the study was IRB approved.

Results: There is a significant difference (p=0.00) between psychiatric and medical patients reasons for re- admittance to ED within a 6 month period. The most common reasons for psychiatric patient initial visits were depression, schizophrenia, psychosis, bipolar, and drug/alcohol abuse. For second and third visits, psych (47.3%), drug/alcohol abuse (10%), musculoskeletal (7%), neuro (6.3%), and GI (6%) were most common. The most common reasons for medical patient visits were CV, respiratory, GI, musculoskeletal, and skin related conditions. Second and third visits were for similar reasons. Within the psych patient population, 9-10% of patients presented with drug/alcohol abuse as a second and/or third ED visit, but not their initial ED visit. This may indicate an initial complication or co-morbidity within the psychiatric patient population.

Psychiatric patients are not readmitted to the ED for the same initial psychological reasons. whereas, medical patients were readmitted for medical reasons. Approximately, 35% of psych patients were readmitted for medical reasons and alcohol drug related reasons versus initial psychiatric reasons. The study indicates that two different management treatments might be employed.

Background

The reason for re-admissions is complex and varies by differing patient populations. For psychiatric patients several studies have shown that 5.4% of Emergency Department visits are due to mental health problems [1,2]. These visits have shown an increase from 1992 to 2001 of 40 percent. From 1996-2006, there was a 36% increase in patient volume in the ED in the US [3]. The re-admittance rate for psychiatric patients ranges between 6 to 15% [1,2].

The re-admission rate for medical patients is also high. It has been seen that as many as 15-25% of patients being readmitted to the hospital within 30 days or less [1-3]. Studies have also found that many of these readmissions are preventable [1,4,5]. This results in further, costly treatments' adding to additional strain in ED resources.

Thus, the question is what is driving this high rate. Several studies have indicated it is a mixture of factors. These include inadequate follow up, ineffective discharge planning and poor doctor-to-doctor communication of patient care and handoff at discharge [6-9]. Numerous interventions have been employed which according to several studies have not been largely effective [10-12]. One possible reason is that they have lumped medical, surgical and psychiatric patients together. This despite the fact that each group has differing needs [13]. As a result, we know less about the specific needs of each subset of patients [14].

This study seeks to identify those reasons. In doing so it can provide information on what the key indicators are for six month re-admissions.

Methods

This was a retrospective, random sampled chart review. It included all ER admitted psychiatric patients and medical patients from 2013-2015. It was conducted at a level 1 adult and pediatric trauma center that has 60,000 visits per year. Sample populations included all psychiatric and medical patients who were re-admitted. The readmission had to occur within a six month period, of initial admission of ED visit within 2014-2016. This was a total of 2253 psych patients; 1532 med patients. From the total number of patients a random sample was used of 300 patients each for a total of 600 patients. This was done by importing all psychiatric and medicine patients onto Excel. Then Random Function was used to randomize patient population. Then the first 300 randomized patients listed from each group were included. Data was then analyzed using SPSS version 22 using frequencies, correlations and ANOVA. Additional data collected from charts which included: age, gender, race/ethnicity, insurance type, visit date, reason for visit initial, second and third, priority score, length of stay, disposition, and charges for visit.

Results

Out of a total of 600 patients 586 enrolled. Six were excluded due to being placed in observation and eight were excluded due to incomplete data or did not return for a second visit. The sample as a whole had a majority (65%) African American and (12%) Hispanic. The total number of males at 59% (356) was higher than female 40.7 % (244). The age range for both patient populations was primarily between 30-49 years. A quarter (25.2%) psychiatric patients (151) and 16.5% medical patients (99) fell in age range. A large percentage of patients in the study did return within 30 days. Almost half 48.7% (175) psychiatric returning within 30 days as compared to over half of 51.3% (184) medical patients.

Psychiatric and medical re-admissions exhibited differences. There were significantly more 60.7% (148) women visiting the ED for medical reasons. As compared to women with psychiatric issues 96 (39.3%) ($p=0.01$). There were significantly more psychiatric patients than medical patients who were between the ages of 30-49 age range ($p=0.00$). They also showed variation within the category of length of stay with 63.8% (196) psychiatric vs. 36.2% (111) medical patients showing one day.

Length of stay also remained different between the patient populations within the 7-8 days category with 85.7% psychiatric vs. 14.3% medicine.

For visit charges psychiatric patients incurred significantly higher ($p<0.05$) charges for initial visits but, no significant difference for their second and third visits. This might have been related to length of stay.

Discussion

There is a significant difference ($p=0.00$) in readmitted ED visits between psychiatric patients and medical patients. The most common reasons for psychiatric patient initial visits were depression, schizophrenia, psychosis, bipolar, and drug/alcohol abuse. For psychiatric patients their second and third visits, psych (47.3%), drug/alcohol abuse (10%), musculoskeletal (7%), neuro (6.3%), and GI (6%) were most common. As for medicine patients, the most common reasons for all three visits were CV, respiratory, GI, musculoskeletal, and skin related issues. See table 1-3 for difference per visit. It is possible that with better management of these illnesses we could reduce the number of medicine patients who are readmitted. Within the psychiatric patient population, there were patients who present with drug and alcohol issues as a second and/or third ED visit, but not the initial ED visit. This could possibly indicate an initial complication or co-morbidity within the psych patient population. These results were similar to Calle et al. and Hernandez et al. all found in their studies [3,7]. There was a range in variation among different types of patients as they related to incidences of readmission [3,7]. A twofold process might

be needed. One that focuses on specific types of mental illness and another that focuses on a separate set of physical illnesses. This was what Gruneir, et al., saw in their study when they identified high- risk patients for specific aftercare [13]. The type of follow up care needed for psychiatric patients based on this study's findings should most likely include medical and alcohol and drug addiction services.

Limitations

This was a retrospective study done within an urban ED patient population. Information could be skewed with data only collected from one healthcare facility. Also this study site uses the Meditech EMR System. It was only able to access patient data back 2 years from 2013 on due to system changes and the Patient Protection and Affordable Care Act (aka Obamacare) taking into place. This constrained the study's ability to look for changes over time. Additionally there were missing data/documentations due to changing standards and practices. Although this resulted in a few patients being taken out of the study this could have had an impact on results.

Conclusions

Approximately, 35% of psychiatric patients who are readmitted were for medical and drug and alcohol. Medical patients however were readmitted for the same medical issues. The study indicates that two different management treatments just might be needed. This two pronged approach could possible reduce readmission rates within this patient population. Referral services should include medical and drug and alcohol services in order to meet the more complex needs these patients bring to the ED.

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