ORIGINAL RESEARCH
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# Utilization of Emergency Department by Psychiatric Patients

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## ABSTRACT

***OBJECTIVE:*** *The primary objective of this study was to determine what types of psychiatric patients utilize the emergency departments (EDs) for their psychiatric care. The secondary purpose was to identify reasons for the change in utilization.*

***METHODS:*** *A convenience study was conducted in an urban, Level I pediatric and adult trauma center with 45,000 annual visits. A portion of the National Health Access survey was administered to all consenting psychiatric patients who presented to the ED between May 2006 to February 2007 with a psychiatric issue as their chief complaint. The survey asked questions regarding healthcare resources used within the last year and the last 2 years, changes in psychological illness, sources of payments for services, reasons for changes in utilization of health care, and satisfaction with healthcare resources and who delivers the health care. The study was institutional review board approved.*

***RESULTS:*** *Of the 310 patients approached, 294 agreed to answer the survey. There was a difference in the types of psychiatric patients that utilize the ED for psychiatric care. The significant difference between patients was found within the following variables: those with a regular physician and regular health source (F= 6.531, <.01), those with a regular health source whom the patient has visited for the most recent care (F= 17.99, <.01), patients who were delayed in receiving psychiatric drugs (F= 11.240, <.01), those who used the ED in the last 12 months (F= 6.75, <.01), number of times of psychiatric evaluation in the ED in last 2 years (F= 7.44, <.01), and number of hospitalizations (F= 6.40, <.01).*

***DISCUSSION:*** *There are two different types of psychiatric patients who use the ED. Those with a regular PCP use the ED primarily for psychiatric reasons versus those without a PCP who use the ED for a variety of health and psychiatric complaints.*

***CONCLUSION:*** *There appears to be two different types of psychiatric patients using the ED for care. One group has a regular source of care for physical and psychiatric care from a PCP. These patients, however, have used the ED more in the last 12 months, present to the ED with a higher level of prior hospitalization, and had the a higher number of psychiatric evaluations in the ED within the last 2 years. Their referral to the ED was made by a primary care physician (PCP) or social worker. The other group is less likely to have a PCP and is referred to the ED primarily by self, family, or police. They have fewer prior psychological-based hospitalizations, have used the ED less in the last 12 months, and had fewer psychiatric evaluations in the ED within the last 2 years.*

## INTRODUCTION

The purpose of this study was to determine what type of psychiatric patient is using the emergency department (ED) for their care. Approximately 4.3 million psychiatric-related ED visits occurred in the United States in 2000, resulting in a rate of 21 visits per 100 adults.[1,2] The number of psychiatric-related ED visits has increased 15% between 1992–2000.[2]

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This increase was most commonly seen in disorders that used to be relatively scarce in the ED, such as mood and anxiety disorders.[1,2] That finding may indicate that the clinical profiles of psychiatric patients entering an ED may be under a progressive change. The ED seems to have become the central entry point for a wider range of patients.[3-5]

Previous research identified patients who repeatedly visit the ED as people who have high unemployment rates and lower social profiles; are younger; depend on some type of public assistance; reside alone; or are more likely to be homeless, self referred, and have substance abuse as at least a portion of the secondary diagnosis if not the primary one.[6-8] Many repeat visitors exhibit a less structured symptom profile than most patients, leading them to seek help in an easily accessible health service with low demands such as an ED. An important aspect of the emergency room situation is its impersonal and transient nature, but, paradoxically, the loosely structured care environment is favored by these patients who are undecided about their commitment to treatment.[7-11]

The cost of treating these patients is extremely high, thus putting additional strain on the ED's already constrained resources. According to the national average, 74% of visits are compensated and 26% are uncompensated. Rotarius and colleagues[12] found that this resulted in Boston hospitals providing $400 million in uncompensated care. The increases have been attributed to numerous factors.

Summers and colleagues[13] stated that one of the contributing factors to the overuse of hospital EDs is the level of satisfaction patients have with the quality of care they have received in the ED. Many findings show that patients who received care in an ED reported being satisfied with the care they received. However, as one study[7] of psychiatric patients satisfaction with ED care illustrates, "The majority of patients appeared to have been satisfied with the psychiatric service provided. Ninety-four percent felt they received information, 93% felt that the staff listened to their problems and 97% felt the staff were professional in their manner." Patients considered the following characteristics of the staff as being helpful: being easy to talk to, providing reassurance, providing direction, projecting a calm manner, and providing information and explanations as required.[7,9] Those researchers, however, believe that this phenomenon is multi-dimensional and that very little is known about the other reasons people with mental illness are choosing the ED.

This leads to the hypothesis that there may be distinct types of psychiatric patients that use the ED for their care. In order to address this gap in our understanding, more research is necessary to understand the impact of patient characteristics such as type of insurance, race, access to health care, understanding of diagnosis, and ability to tolerate treatment regimens when choosing the ED for care.[12,14,15] The knowledge of this will allow hospitals that house these overburdened EDs a better understanding of the role they play in delivery of health care to the mentally ill.

## METHODS

A convenience study was conducted in an urban, Level I pediatric and adult trauma center with 45,000 annual visits. A portion of the National Health Access survey (2006 version) was administered by research fellows in the treatment area to all consenting psychiatric patients who presented to the ED from May 2006–February 2007 with a psychiatric-related chief complaint. The survey asked questions regarding healthcare resources used within the last year and last 2 years, changes in psychological illness, sources of payments for services, reasons for changes in utilization of health care, and satisfaction with healthcare resources and who delivers the healthcare. Information regarding psychiatric diagnosis and medications given or currently prescribed were taken from the charts after the patient was seen by a clinician. Patients were excluded from the study if they presented with a non-psychiatric chief complaint, were not medically stable, and were either physically or chemically restrained. The study was institutional review board approved.

## RESULTS

A total of 310 subjects were approached and 291 subjects were enrolled in the study. The sample consisted of 133 males, 152 females, and the count of 6 missing genders. The educational levels varied from 31% who completed ninth to twelfth grade, 21% who graduated high school, and 23% who experienced some college. The top four diagnoses were 25% depression, 20% personality disorders, 15% bipolar disorder, and 13% schizophrenia. The majority (58%) took antidepressants and 10% reported taking no medication.

Fifty-five percent of the patients had a regular medical doctor and 42% did not (the remaining 3% did not respond to that question when asked). Insurance was cited as the reason for the change in ED use over the last year by 36% versus the 50% who stated the change in ED use was due to better access.

The source of payment for their medical care was varied. However, it was overwhelmingly government funded. The majority, at 40% within the study, had Medicaid and 15% had Medicare; 10% used both as their source of payment for medical services. The other sources of payment were out of pocket at 16% and no source of payment public or private at 16%; 3% did not answer the question. Tables 1 and 2 show the responses.

An analysis of variance test with significance at ≤.05 was used in order to determine if there was a difference between types of patients that used the ED for their psychiatric care

versus those who used it for psychiatric and general healthcare. The significant difference between patients was found within the following variables: those with a regular physician and regular health source (F= 6.531, <.01), those with a regular health source whom the patient has visited for the most recent care (F= 17.99, <.01), patients who were delayed in receiving psychiatric drugs (F= 11.240, <.01), those who used the ED in the last 12 months (F= 6.75, <.01), number of times of psychiatric evaluation in the ED in last 2 years (F= 7.44, <.01), and number of hospitalizations (F= 6.40, <.01).

There were no significant differences between the two groups based on race, gender, education, age, or types of psychiatric illness.

Within this study, there were two distinct types of psychiatric patients that use the ED for their care. One group, who made up 45% of those in the study, used the ED for the majority of their healthcare needs within the last 12 months. Twenty-five percent of them used the ED exclusively for care of physical and psychiatric health problems; they do not have a regular primary care physician (PCP). Those that used the ED rated the care that they received as good to excellent. The majority have not had a psychiatric hospitalization within the last 2 years.

The second group, who made up 55% of the study, consisted of individuals who used their physician for the majority of their psychiatric and physical health problems. When they did go to the ED for mental health concerns it was because their doctor or social worker recommended it. This group had a higher level of hospitalizations within the last 2 years (Table 3). They were also less likely to delay purchasing drugs due to cost. The types of healthcare professionals they saw most recently were different. Over 33% of those with a PCP had most recently been seen in their doctor's office versus only 9% of those without a PCP. Those with mental health issues that have a regular PCP seem to be those with a higher need for hospitalizations related to their illness. The PCP and or social worker they used for their psychiatric services were the individuals who recommended and referred these patients to use the ED for services.

## DISCUSSION

It is difficult to assess why there is an increase in the numbers of psychiatric patients using the ED for their psychiatric complaints. Although these patients were very satisfied with their ED care, the study does illustrate some concerning findings. Thirty-three percent of the patients were delayed in obtaining psychiatric care and many of these patients used the ED frequently. They saw the ED as a more accessible place to receive care.

Those patients with a PCP appeared to use the ED only for psychiatric reasons. However, those who did use the ED appeared from the data to have mental illness with higher levels of previous hospitalizations due to their illness and more psychiatric evaluations in the ED within the last 2 years.

It is uncertain why there is a breakout of patients with a PCP that implies a worse clinical condition. There is a subset of these patients that get admitted frequently to psychiatric facilities. It brings up the question of whether patients with a PCP have a worse clinical condition or whether the care provided by the PCP has a limitation to how much it can address and treat the clinical conditions (and therefore the PCP refers the patient to the ED). Further study needs to be conducted to explain why this relationship occurs.

There are certain limitations to this research. First, it only examines an inner city ED. A stronger and differing pattern in usage might be seen if a suburban ED was used as a comparison group. The sample size overall was large enough to make comparisons between the two groups in some but not all cases. A

**TABLE I**
**QUESTIONS AND RESPONSE**

| | Responses | |
|---|---|---|
| ***Question*** | ***Have PCP*** | ***No PCP*** |
| Have regular medical doctor | 55% yes | 42% no |
| Regular health source advice | 76% yes | 24% no |
| *Changes in place of health care* | | |
| Due to insurance | 69% yes | 41% no |
| Delay in purchasing drugs due to cost | 30% yes | 70% no |
| Insurance coverage | 69% yes | 41% no |

PCP=primary care physician.

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**TABLE 2**
**CHANGES IN THE LAST 1–2 YEARS**

| ***Question*** | ***Have PCP*** | ***No PCP*** |
|---|---|---|
| Delay in getting mental health or counseling in last 12 months | 35% yes | 64% no |
| Psychiatric care changed in 2 years | 27% yes | 20% not getting help |
| Reasons for change | 26% relocation | 36% no |
| Use ED in last year | 58% yes | 22% 5>10 times |
| Times ED evaluation in last 2 years | 47% seen 1–4 times | 70% no |
| Change in ED usage in last 2 years | 13% yes | 36% insurance |
| Why changes in ED use | 50% better access | |
| Satisfaction with the ED | 50% excellent | 30% good |

PCP=primary care physician; ED=emergency department.

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much larger sample would allow for a more robust and reliable analysis of inter- and intra-group differences and similarities.

Second, the use of the National Health Access survey meant that the time it took to answer all the questions was long. At least 80% of those that refused did so due to the length of time it took to answer the survey. With the exception of using medical charts to confirm diagnosis and medication regimes, there is often no other way to confirm patients truthfulness to the questions. The tool also did not adequately assess all potential reasons that have influenced the increased ED utilization for psychiatric complaints.

## CONCLUSION

There appears to be a range of clinical profiles among the patients using the ED for care.[4] In this study, there were two different types of psychiatric patients using the ED for care. The patients that use the ED frequently are using it as an access point to in-patient psychiatric treatment. They have been referred by another healthcare professional and are getting psychiatric evaluations.

This makes for a diverse mixture of psychological patients who come into the ED doors. It is also what has been seen on a national level with not just an overall increase in the number of patients but also in the range of services needed once

**TABLE 3**
**SIGNIFICANT DIFFERENCES BETWEEN THOSE WITH PCP AND THOSE WITHOUT***

| *Question* | *Have PCP*† | *No PCP*† | P | F *(CI at 95%)* |
|---|---|---|---|---|
| Have you seen someone about mental health issues in the last 12 months? | 93% (95) yes<br>5% (5) no | 52% (37) no<br>29% (20) yes | <.01 | |
| Type of clinician | 36% (35) PCP<br>12% (12) SW<br>23% (22) Psychologist<br>11% (10) None | 13% (10) PCP<br>16% (12) SW<br>28% (21) Psychologist<br>15% (11) None | NS | |
| Where did most recent contact take place? | 35% (32) doctor's office<br>20% (19) ED<br>11% (10) outpatient clinic | 9% (6) doctor's office<br>33% (21) ED<br>6% (4) outpatient clinic | <.1 | 17.99 (4.02-7.55) |
| Payment source | 42% (44) Medicaid<br>11% (12) Medicare<br>11% (12) Both<br>13% (14) No source | 37% (30) Medicaid<br>16% (13) Medicare<br>10 % 98) Both<br>18% (15) No source | NS | |
| Number of psychiatric hospitalizations | 26% (26) None<br>19% (19) 1–2<br>16% (16) 3–4<br>% (9) 5–6<br>6% (6) 7–10<br>15% (15) >10 | 30% (22) None<br>24% (18) 1–2<br>12% (9) 3–4<br>12% (9) 5–6<br>2% (2) 7–10<br>6%(5) >10 | <.1 | 6.40 (-4.17-5.14) |
| Used the ED in last 12 months | 64% (55) yes<br>30% (26) no | 48% (31) yes<br>43% (28) no | <.1 | 6.751 (-10.21-36.47) |
| Has psychiatric condition changed? | 41% (41) Better<br>40% (39) Worse | 40% (32) Better<br>37% (30) Worse | <.1 | 6.60 (-7.78-32.19) |
| Psychiatric evaluations in the ED (2 years) | 15% (12) None<br>13% (10) 1–2<br>38% (29) 3–4<br>10% (8) 5–6<br>3% (3) 7–10<br>13% (10) >10 | 29% (19) None<br>25% (17) 1–2<br>18% (12) 3–4<br>3% (2) 5–6<br>3% (2) 7–10<br>9% (6) >10 | <.1 | 7.44 (2.64-3.58) |
| Delay purchasing drugs due to cost | 29% (28) yes<br>65% (61) no | 33% (26) yes<br>56% (44) no | <.1 | 11.24 (1.58-2.08) |

* Not all patients answered all questions.

† Number in parentheses indicates number of responses.

PCP=primary care physician; CI=confidence interval; SW=social worker; NS=not respond; ED=emergency department.

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they are being treated in the ED.[5] Summers and colleagues[13] found those using the ED also rated the services they received as good to excellent. Although not directly examined in this study, this could be one of the reasons for their continued use of the ED for services, especially for those patients without a regular PCP, psychologist, and/or social worker. The less frequent users of the ED in this study do directly fit those seen in other studies in that they were not committed to a treatment plan and/or provider in part due to presenting with a less structured or dual diagnosis.[10]

This study did help identify factors that contribute to increased utilization of the ED by those with psychiatric complaints. Those factors are varied and include not just costs and form of payment for treatment but perceived intensity of illness, use of a PCP and/or other psychiatric healthcare provider, lack of available community services, and the high level of satisfaction with the care they receive in the ED. This mixture of factors will need to be studied further in the future to more fully explain the implication of these results and the real impact they are having in contributing to ED overcrowding. For solutions to be devised and significant impacts on the system to be made, all components feeding the problem must be investigated. With that knowledge, we can understand and investigate which viable solutions can be devised and implemented. ***PP***

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