Predictors of Repeated Visits to a Pediatric Emergency Department Crisis Intervention Program

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ABSTRACT

Objectives: Despite documented increases in emergency department (ED) mental health (MH) presentations, there are inconsistent findings on the characteristics of patients with repeat presentations to pediatric EDs (PEDs) for MH concerns. Our study sought to explore the characteristics of MH patients with repeat PED visits and determine predictors of return visits, of earlier repeat visits, and of more frequent repeat visits.

Methods: We examined data collected prospectively in a clinical database looking at MH presentations to a crisis intervention program housed within a PED from October 2006 to December 2011. Predictive models based on demographic and clinical variables were constructed using logistic, Cox, and negative binomial regression.

Results: A total of 4,080 presentations to the PED were made by the 2,900 children and youth. Repeat visits accounted for almost half (45.8%) of all presentations. Multivariable analysis identified five variables that independently predicted greater odds of having repeat presentations, greater risk of earlier repeat presentations, and greater risk of frequent repeat presentations. The five variables were: female, living in the metropolitan community close to the PED, being in the care of child protective services, taking psychotropic medications, and presenting with an actionable need in the area of mood disturbances.

Conclusions: Repeat visits account for a large portion of all MH presentations to the PED. Furthermore, several patient characteristics are significant predictors of repeat PED use and of repeating use sooner and more frequently. Further research is needed to examine interventions targeting this patient group to ensure appropriate MH patient management.

RÉSUMÉ

Objectifs: Malgré une augmentation confirmée des cas de troubles mentaux (TM) au service des urgences, il existe des divergences quant aux caractéristiques des patients qui consultent de nouveau au service des urgences pédiatriques (SUP) pour des TM. L'étude décrite ici visait à examiner les caractéristiques des patients qui retournaient au SU pédiatrique pour des TM, et à déterminer les variables prévisionnelles de reconsultation, de reconsultation précoce ou de reconsultation fréquente.

Méthodes: Les auteurs ont procédé à un examen de données prospectives, recueillies d'octobre 2006 à décembre 2011 dans une base de données cliniques portant sur des TM, dans le cadre d'un programme d'intervention en cas de crise, établi dans un SUP. Des modèles prévisionnels, fondés sur des variables démographiques et cliniques ont été élaborés à l'aide de régressions logistiques, de régression de Cox et de régressions binomiales négatives.

Résultats: Au total, 4080 consultations au SUP ont été réalisées pour 2900 enfants et jeunes. Les reconsultations représentaient presque la moitié (45,8 %) de toutes les consultations. L'analyse multidimensionnelle a permis de cerner cinq variables indépendantes, prévisionnelles d'un risque accru de reconsultation, de reconsultation précoce ou de reconsultation fréquente; il s'agit du fait d'être une femme, de vivre dans la grande agglomération près du SUP, de relever des services de protection de l'enfance, de prendre des psychotropes et d'avoir des besoins nécessitant des interventions relatives aux troubles de l'humeur.

Conclusions: Les reconsultations représentent une grande part de toutes les consultations faites au SUP pour des TM. En outre, plusieurs caractéristiques des patients sont des variables prévisionnelles importantes de reconsultation au SUP, de reconsultation précoce ou de reconsultation fréquente. Il faudrait mener d'autres études sur des interventions ciblant ce groupe particulier de patients afin que les TM fassent l'objet d'une prise en charge appropriée.

Keywords: mental health, repeat visits, repeat visitors, Pediatric Emergency Department, frequent visits, recent visits

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INTRODUCTION

Presentations to the pediatric emergency department (PED) for mental health (MH) issues have increased in Canada and the United States.[1-5] PED overcrowding has become a serious concern and can be a significant barrier to health care access for children and youth with mental illness.[6,7] Although only 4%–7% of all emergency visits pertain to MH issues, these visits utilize an inordinate amount of PED resources.[8,9] Research suggests that MH care practices vary across PEDs and that few are evidence based.[10] Additionally, ED staff generally lack MH training and the availability of MH professionals is limited.[11] Declines in community MH resources for children and adolescents have made PEDs the "safety net" of a fragmented MH infrastructure.[12] Recently published Ontario population data show MH related ED visit rates have increased between 2006–2011 at a higher rate than outpatient visits.[5] In fact, when faced with immediate problems, parents and youth seek emergency medical services prior to contacting their primary care physicians making the PED their first point of contact with the health care system.[7,13]

Repeat presentations represent a large proportion of PED MH presentations with estimates ranging from 12% to 36%.[14-16] This may be the result of a lack of availability or difficulty accessing MH services that effectively meet this patient population's needs.[14,17] Findings on predictors of repeat PED for MH issues are inconsistent. Identifying independent predictors is critical for gaining insight into the factors that contribute to repeated ED use. Such insights will be useful in the development of care pathways within the ED and with community partners, and to provide education regarding ED MH services to key stakeholders. The study objective was to examine characteristics of patients presenting to a PED with MH concerns that predict repeat PED use as well as timing and frequency of repeat visits. Based on previous research[15,18-20], we expected adolescent females presenting with needs in the area of mood or psychotic disturbances would be more likely to have repeat PED presentations. Analyses of timing and frequency of repeat MH PED presentations were exploratory.

PATIENTS AND METHODS

Setting

This study analyzed data obtained from the Children's Hospital of Eastern Ontario's (CHEO) MH crisis intervention database. CHEO is a pediatric tertiary care hospital with an annual ED census of 70,000, with ~3,200 MH visits per year. The hospital serves a population of 1,261,493 with 14.9% consisting of visible minorities, and 13.8% considered low income.[21] Crisis Intervention Workers (CIW) in the PED respond to MH emergencies between the hours of 8:00 AM and midnight. Patients are assessed and either discharged from the ED or psychiatry is consulted (available in-person or by telephone weekdays, on-call 24/7). Patients presenting after midnight are often held overnight for CIW assessment in the morning. Patients are assessed and managed by pediatric emergency physicians when CIW are unavailable or in need of medical clearance.

Participants

All patients presenting to the PED Crisis Intervention Program between October 2006 and December 2011 were included (Figure 1). The study was approved by the hospital's Research Ethics Board.

Measures

During assessments, CIWs collected demographic and clinical information from patients. Age was categorized as children (0–12 years) and adolescents (13–17 years). Patients' community was categorized as urban (metropolitan Ottawa) and rural otherwise. CIWs recorded yes/no information about whether patients were in

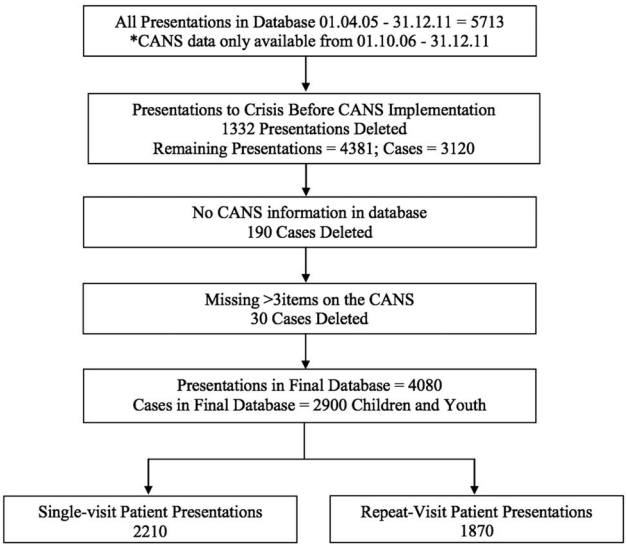

Figure 1. Study flow diagram

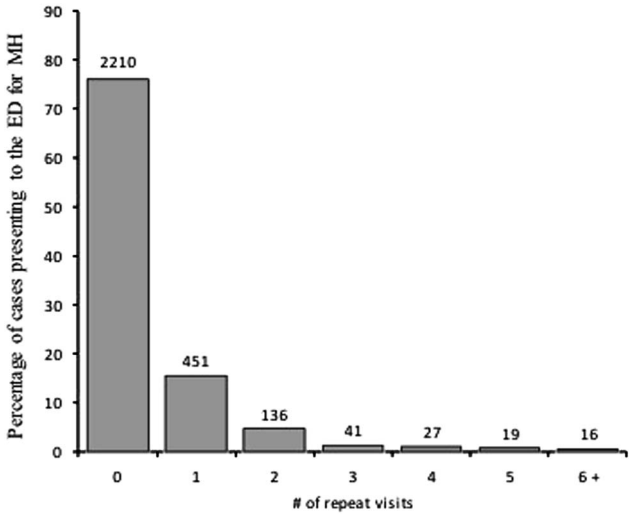

Figure 2. Histogram of repeat visits to the pediatric ED (N = 2,900)

Child Protective Services (CPS) care, had a previous psychiatric hospitalization, and were currently prescribed psychotropic medications. Psychiatric consult was coded as "yes" if a psychiatrist was consulted by telephone or had a face-to-face consultation with the patient at their index visit. Current professional resources was coded as "yes" if patients were obtaining care from one or more MH professional (i.e., psychologist, psychiatrist, counselor, social worker, and/or general practitioner/pediatrician) at their index visit. Finally, an 18-month wash-out period ensured that the index visit occurred during the study period.

The Child and Adolescent Needs and Strengths-Mental Health tool

The Child and Adolescent Needs and Strengths-Mental Health tool (CANS-MH 3.0)[22] is a communimetric measure[23] that integrates information concerning needs and strengths of children and youth with MH challenges. The CIWs used items from this tool that were key for PED decision-making and communication (see Table 1). Items were scored on action level anchors: (0) no evidence: no need for action; (1) watchful waiting/prevention: need should be monitored, or efforts to prevent it from returning or getting worse should be initiated; (2) action: intervention is required because the need interferes with functioning; (3) immediate/intensive action: need is either dangerous or disabling. Items were re-coded as "actionable" if the item was given ratings of 2 or 3 by the CIW and as "not actionable" if the item was rated a 0 or 1. The reliability of the CANS-MH 3.0 is unaffected by selecting a subset of target items.[24] The interrater reliability between CIWs was 0.82 and yearly recertification is required.

Data analysis

The data were analyzed using SPSS v.21.0.[25] Cases where the CANS-MH 3.0 was not completed were excluded (n = 190; 6.08%). Cases where more than three CANS-MH 3.0 items were missing were deemed unreliable and removed (n = 30; 0.96%). In the remaining cases, as per CANS-MH 3.0 scoring guidelines, missing items were imputed as "no need for action". No single item had missing values greater than 7% and all but three items had less than 1% missing data. As a sensitivity analysis, missing items were also randomly imputed according to the prevalence of observed actionable need for that item and yielded very similar results.

Univariable logistic regressions were conducted to identify the demographic and clinical variables associated with repeat PED use ($p < 0.1$). Multivariable logistic regressions were then conducted at $p < 0.05$ with the significant univariable predictors to control for the other variables in the model. For repeat-visit patients, univariable Cox regressions were conducted to examine which demographic and clinical characteristics predicted earlier returns to the PED. Significant variables ($p < 0.1$) were then tested in a multivariable Cox regression model at $p < 0.05$ to control for other variables in the model. Finally, univariable negative binomial regressions were conducted to examine which demographic and clinical characteristics predicted a greater frequency of return visits to the PED.[26] Both the univariable and multivariable negative binomial regression were conducted controlling for the total number of days each patient had during the study period to re-present to the PED.

RESULTS

A total of 4,080 PED presentations were made by 2,900 children and youth during the target time interval from October 2006 to December 2011. The majority of presentations were index visits (54.2%), and repeat visits ranged from 1 to 15 (Figure 2). The patients tended to be adolescents (75.4%) and female (56.7%); see Table 1. The majority of patients had no previous psychiatric hospitalization (91.2%), did not receive a psychiatric consult (63.5%) and were not in CPS care (93.2%). A third (34.4%) were taking one psychotropic

Table 1. Univariable (Unadjusted) And Multivariable (Adjusted) Logistic Regression Analyses For Variables Predicting Repeat-Visit Patients

	Number of patients (%)		Unadjusted		Adjusted	
Characteristic	Repeat-Visit Patients 690 (23.8)	Total Patients 2900	OR	95% CI	OR	95% CI
Age Group						
0-12	158 (22.2)	713				
13-17	532 (24.3)	2187	1.129	.923 to 1.382	.923	.736 to 1.157
Patient's Gender						
Male	248 (19.7)	1257				
Female	442 (26.9)	1643	1.497***	1.255 to 1.787	1.431***	1.184 to 1 .730
Previous Psychiatric Hospitalization						
No	594 (22.7)	2622				
Yes	92 (36.5)	252	1.963***	1.495 to 2.577	1.583**	1.172 to 2.138
Currently Taking Psychotropic Medications						
No	385 (20.3)	1895				
Yes	301 (30.6)	983	1.731***	1.452 to 2.064	1.541***	1.265 to 1.876
Current Professional Resources						
No	217 (21.6)	1007				
Yes	468 (25.0)	1872	1.214**	1.011 to 1.457	1.019	.835 to 1.243
Psych Consult						
No	400 (21.9)	1824				
Yes	281 (26.8)	1048	1.304**	1.094 to 1.555	1.139	.927 to 1.400
Community						
Outside of Ottawa	134 (19.0)	704				
Metropolitan Ottawa	544 (25.2)	2156	1.436***	1.162 to 1.774	1.505***	1.208 to 1.874
In Child Protective Services Care						
No	620 (23.2)	2671				
Yes	65 (33.2)	196	1.641**	1.203 to 2.239	1.548**	1.100 to 2.178
CANS-MH 3.0 Items						
Psychosis						
Not Actionable	674 (23.9)	2822				
Actionable	16 (20.5)	78	.822	.471 to 1.435		
Anxiety						
Not Actionable	437 (22.9)	1908				
Actionable	253 (25.5)	992	1.152	.964 to 1.377		
Mood						
Not Actionable	409 (21.2)	1928				
Actionable	281 (28.9)	972	1.510***	1.266 to 1.802	1.321**	1.066 to 1.636
Attention Deficit/Impulse Control						
Not Actionable	535 (23.4)	2287				
Actionable	155 (25.3)	613	1.108	.902 to 1.362		
Oppositional Behavior						
Not Actionable	524 (23.2)	2257				
Actionable	166 (25.8)	643	1.151	.941 to 1.408		
Conduct Behavior						
Not Actionable	651 (23.7)	2742				
Actionable	39 (24.7)	158	1.053	.726 to 1.527		

Table 1. (Continued)

	Number of patients (%)		Unadjusted		Adjusted	
Characteristic	Repeat-Visit Patients 690 (23.8)	Total Patients 2900	OR	95% CI	OR	95% CI
Emotional Control						
Not Actionable	539 (23.1)	2330				
Actionable	151 (26.5)	570	1.197*	.971 to 1.477	1.008	.805 to 1.261
Attachment						
Not Actionable	419 (23.0)	1822				
Actionable	271 (25.1)	1078	1.124	.943 to 1.340		
Adjustment to Trauma						
Not Actionable	591 (23.2)	2545				
Actionable	99 (27.9)	355	1.279*	.996 to 1.641	1.189	.909 to 1.555
Eating Disorder						
Not Actionable	637 (23.2)	2741				
Actionable	53 (33.3)	159	1.651**	1.174 to 2.324	1.269	.879 to 1.832
Suicide Risk						
Not Actionable	541 (22.9)	2358				
Actionable	149 (27.5)	542	1.273**	1.031 to 1.573	.884	.684 to 1.144
Self Injuring Behavior						
Not Actionable	647 (23.3)	2774				
Actionable	43 (34.1)	126	1.703**	1.166 to 2.487	1.257	.835 to 1.892
Danger to Others						
Not Actionable	659 (24.0)	2749				
Actionable	31 (20.5)	151	.819	.547 to 1.228		
Elopement						
Not Actionable	648 (23.7)	2733				
Actionable	42 (25.2)	167	1.081	.754 to 1.550		
Substance Abuse						
Not Actionable	626 (24.1)	2593				
Actionable	64 (20.9)	307	.828	.619 to 1.106		
Sexual Aggression						
Not Actionable	688 (23.8)	2891				
Actionable	2 (22.2)	9	.915	.190 to 4.414		
Social Behavior						
Not Actionable	669 (24.0)	2791				
Actionable	21 (19.3)	109	.757	.467 to 1.228		
Crime/Delinquency						
Not Actionable	677 (24.1)	2804				
Actionable	13 (13.4)	96	.492**	.273 to .889	.509**	.273 to .951
Involvement in Treatment						
Not Actionable	667 (24.1)	2768				
Actionable	23 (17.4)	132	.665*	.420 to 1.051	.644*	.398 to 1.042

* $p<0.1$; ** $p<0.05$; *** $p<0.001$;
Note. All variables are coded 0 = no/not actionable and 1 = yes/actionable. 0 is always the reference category of the variables.

medication and 14% were taking two or more. These medications included antidepressants (19.1%), stimulants (13.4%), sleep medication (5.9%), anti-psychotic (5.7%), anti-anxiety (3.8%), mood stabilizers/anti-convulsants (2.4%), and not specified (1.4%). Patients tended to be connected with professional MH resources (64.5%) and living in metropolitan Ottawa (75.4%). Frequencies for the CANS-MH 3.0 variables are presented in Table 1. When the CANS-MH 3.0 items were examined together, the majority of PED patients (87.9%) presented with one or more needs requiring action (median = 2; range = 0–16).

Characteristics of repeat patients

Univariable logistic regressions were conducted to determine the characteristics of repeat visitors to the ED by comparing repeat-visit patients to single-visit patients with each demographic and CANS-MH 3.0 variable as the predictor. Odds ratios (ORs) and 95% confidence intervals (CIs) are presented in Table 1. Being female, from metropolitan Ottawa, in CPS care, having a previous psychiatric hospitalization, currently taking psychotropic medications, having received a psychiatric consult at the index visit, and being connected with professional resources significantly predicted greater likelihood of repeat PED use. Patients presenting with an actionable need in the areas of mood, emotional control, adjustment to trauma, eating disorder, suicide risk, and self-injuring behavior also was predictive of an increased likelihood of repeat PED presentations. Patients presenting with an actionable need in crime/delinquency (moderate/serious levels of criminal activity in the last 30 days) or involvement in treatment (resistant or non-compliant) were less likely to present to the PED.

All demographic and CANS-MH 3.0 variables that were significant ($p < 0.1$) at the univariate level and age (due to its clinical meaningfulness) were tested in a multivariable logistic regression model to determine which variables independently predicted the likelihood of repeat PED visits (Table 1 adjusted). Patients who were female, had previous psychiatric hospitalization, were prescribed psychotropic medications, were living in metropolitan Ottawa, in CPS care, and who presented with an actionable need on the CANS-MH 3.0 mood item (meeting criteria for depression or bipolar disorder) had predicted increased likelihood of repeat PED presentations. Patients presenting with an actionable need in crime/delinquency were significantly less likely to revisit the PED.

Timing of PED return

To identify characteristics that predicted earlier repeat PED presentations, Cox regressions were conducted by examining the number of days between each patient's index presentation and their first repeat presentation. Results of the multivariable analysis indicated that females (HR $= 1.3$, $p < 0.05$; 95% CI 1.1–1.6), taking psychotropic medication (HR $= 1.4$, $p < 0.001$; 95% CI 1.2–1.6), connected to professional resources (HR $= 1.3$, $p < 0.05$; 95% CI 1.0–1.5) and with previous psychiatric hospitalization (HR $= 1.3$; $p < 0.05$; 95%CI 1.0–1.6) had significantly higher risks of repeating earlier than their respective counterparts. Patients living in metropolitan Ottawa (HR $= 1.5$, $p < 0.001$, 95% CI 1.2–1.8) and those in CPS care (HR $= 1.5$, $p < .05$; 95% CI 1.1–1.9) had the highest risk (46% and 47% respectively) of all significant multivariable predictors of repeating earlier. Patients presenting with an actionable need in adjustment to trauma (HR $= 1.3$, $p < 0.05$, 95% CI 1.0–1.6) or mood (HR $= 1.4$, $p < 0.001$; 95% CI 1.2–1.7) were more likely to repeat earlier.

Frequency of return visits

Negative binomial regressions were conducted to examine how often repeat-visit patients returned to the PED and factors associated with a higher number of presentations. Significant unadjusted variables were entered into a multivariable model which revealed that patients who were female (RR $= 1.6$, $p < 0.001$; 95% CI 1.3–1.9), had professional resources (RR $= 1.9$, $p < 0.001$; 95% CI 1.6–2.3), lived in metropolitan Ottawa (RR $= 1.8$, $p < 0.001$; 95% CI 1.4–2.2), were taking psychotropic medication (RR $= 1.3$, $p < 0.05$; 95% CI 1.0–1.6), were in CPS care (RR $= 1.6$, $p < 0.05$; 95% CI 1.2–2.3), and who presented with an actionable need in the area of mood (RR $= 1.6$, $p < 0.001$; 95% CI 1.3–2.0), had significantly more repeat PED presentations controlling for all other factors. Patients with an actionable need who were involved in treatment (resistant or non-compliant) had significantly fewer repeat PED presentations (RR $= 0.4$, $p < 0.05$; 95% CI 0.3–0.7). All other variables were not significant.

DISCUSSION

Repeat visits to the PED for MH care were high in this sample and this finding echoes recently reported Canadian population findings indicating that 39% of children and youth presenting to the ED for mental disorders had three or more visits.[27] These rates of repeat visits are considerably higher than the 15% of pediatric patients who revisited the ED for other reasons.[27] This study examined characteristics of repeat PED users for MH issues, and characteristics that predicted the timing and frequency of repeat visits. Determining predictors of youth MH repeat visits is necessary to better understand the needs of this PED sub-population and develop

optimal care plans and pathways. Five variables were significant independent predictors of repeat PED users, earlier timing, and higher frequency of visits: being female, living in metropolitan Ottawa (closer to the PED), in CPS care, taking psychotropic medications, and meeting criteria for a mood disorder.

Demographic determinants

As hypothesized, our results are consistent with previous findings[15,19] suggesting that being female was a significant predictor of repeat PED presentations. Females were also significantly more likely to have earlier repeat presentations and more frequent repeat presentations. These results may reflect higher MH stigma experienced by boys[28] since girls are almost twice as likely to visit PEDs for MH as boys[29]. Previous results showed that older age significantly predicted repeat visits[15,20] and visiting earlier[19]. Yet this study showed that when other variables are taken into account, age was not a significant predictor of repeat visits between children and adolescents. There have been mixed findings pointing to a link between geographical region and repeat PED use.[14-16] This study showed that youth living closer to the PED were more likely to revisit, repeat sooner and more frequently. Studies conducted in general EDs[30-32] also found that metropolitan patients were more likely to have repeat presentations. These findings support the need for increased crisis management services for urban centers.

Finally, our findings that youth in CPS care predicted repeat PED use, earlier repeat visits and more frequent PED visits is congruent with previous studies.[18,20] Therefore, better integration of care between CPS agencies, hospitals, and specialized MH professionals seems warranted for this particularly high needs population.

Service use determinants

Although previous research showed that current involvement in and access to MH services predicted repeat ED use[14,16,33,34], our study demonstrated that patients connected with previous resources were more likely to repeat earlier and more frequently to the PED when controlling for other variables. Past research on pediatric and adult samples shows that lack of availability from primary care during weekend and evening hours and those dissatisfied with primary care were more likely to visit the ED.[32,35] Also consistent with previous research[16,20], our results indicated that patients were more likely to return to the PED if they had a history of previous psychiatric hospitalization. Previous psychiatric hospitalization also predicted earlier repeat presentations. These findings suggest that patients being discharged from inpatient units may have complex MH needs, perceive PED presentations as "normative", and are therefore heavy users of all MH systems. Meeting the complex needs of these patients is challenging and further research and intervention on this high risk sub-population is needed.

Clinical determinants

To our knowledge, no studies of MH presentation to PEDs have examined psychotropic medication use as a risk factor for repeat PED use. In this study, patients prescribed psychotropic medications were more likely to have repeat PED presentations, earlier repeat presentations, and a higher frequency of repeat presentations. These patients may have complex MH needs and may require additional monitoring that they are unable or unwilling to access through their community care provider(s). Our database did not include information about patients' compliance with their medications which may play a role in patients' likelihood of repeating.

Having an identified need in the area of mood disturbance or adjustment to trauma both independently predicted repeat visits to the PED. Mood findings are consistent with previous research on repeat presentations[14,15,18] and extend the literature by identifying mood as an independent predictor of earlier and more frequent repeat visits. Impairment in functioning from a traumatic event was also predictive of earlier repeat presentations, which has not been previously observed. This could reflect lack of appropriate access to treatment in the community, and ED clinicians have the potential to assist these youth by identifying treatment gaps, initiating referrals, and advocating for timely provision of service. Contrary to previous research, suicide risk and self-injuring behavior were not significant predictors of repeat PED use. Although, these variables were significant predictors or associated with repeat use in previous research[16,18,20], our study showed that when other demographic, service use and clinical variables are considered, they were not significant.

Two actionable need areas predicted lower rates of return to the ED; patients involved in crime/delinquency within the past 30 days or those uninvolved with their treatment. We speculate that these youth did not return

to the PED because they were initially brought in unwillingly by law enforcement or later became involved with the criminal justice system. It is also possible that a subgroup of youth, despite requiring MH services do not want to be involved in treatment or access community services. Previous research shows that 30% of non-compliant patients return to the PED after 6 months[18] which is consistent with current study findings of non-compliance as a risk factor for PED repeat visits. Involvement in crime/delinquency has not previously been assessed as a predictor of repeat ED use.

LIMITATIONS

This study may have underestimated counts of repeat visits due to patients moving away, entering the penal system, or turning 18 during the study period. Additionally, it is probable that some patients were seen by pediatric emergency physicians or on-call psychiatrists if they presented after CIWs operating hours and these visits were not counted in this study. In addition, we may have missed other important contributing factors to repeat visits. Treatment recommendations post-discharge and ratings of availability and satisfaction with primary care were not included in these analyses. Discharge recommendations accessed or consulted by patients and caregivers, and information on availability and satisfaction with primary care could have influenced the likelihood to repeat, repeat sooner, and repeat more frequently, as would data on medication adherence, appropriateness, and dose responsiveness.

CONCLUSIONS

The goal of this study was to examine predictors of MH repeat PED presentations and determine predictors of timing and frequency of repeat PED patients. Repeat visits account for a large portion of all MH PED presentations and further research is needed to examine interventions that target those at the highest risk of repeating, repeating sooner, and more often. Educational interventions around accessing the most appropriate service for the level of care required (e.g., crisis line, urgent care, primary care, drop in clinics) should also be developed and evaluated. In an attempt to address overcrowding, lack of resources and inadequate MH training, best practices have recently been developed in the form of a PED MH clinical pathway. The pathway provides guidelines and a set of minimum standards, including trained PED MH clinicians and procedures for a seamless transition to follow-up community services, to ensure optimal outcomes for this population.[36,37] Implementation and evaluation of the pathway, including its impact on repeat visits to the PED, is currently underway in Ontario.[38]

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