Frequency and Correlates of Inappropriate Pediatric Psychiatric Emergency Room Visits

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Background: Despite increasing pediatric psychiatric emergency room service (PPERS) visits, data are lacking regarding visit characteristics and appropriateness.

Method: This retrospective cohort study consecutively assessed youngsters aged < 18 years between January 1 and December 31, 2002, utilizing data from a 12-page semistructured institutional evaluation form. Appropriateness, severity, acuity, and harm potential of PPERS visits were rated on a Likert scale.

Results: Of 1,062 PPERS patient visits (mean ± SD age: 13.5 ± 3.1 years, 51.1% male, and 51.2% white), 305 (28.7%) led to hospitalization. Although most patients (68.7%) were in outpatient care, only 21.9% sought and 11.5% completed an outpatient evaluation prior to reaching the emergency room. As many as 34.4% of PPERS visits were somewhat/very inappropriate (optimal care: outpatient evaluation/treatment, even if delayed), 26.6% were somewhat appropriate/neutral (best served by outpatient evaluation/treatment, but timely appointment unavailable), and only 39.0% were fully appropriate. Main reasons for inappropriate PPERS visits were direct emergency room referral from school ($P = .0056$) or mental health provider ($P = .0438$) without prior psychiatrist evaluation, or unavailable appointment ($P = .0304$). Multivariate predictors of inappropriate PPERS visits ($r^2 = .296$, $P < .0001$) included current Global Assessment of Functioning score > 48 ($P < .0001$), absent suicidal ideation/attempt ($P < .0001$), low harm potential (< 4.4, $P < .0001$) and severity (< 4.8, $P = .0136$) (1- to 7-point scale) of presenting complaint, and absent psychosis ($P = .0008$).

Conclusions: Over one third of PPERS visits were inappropriate, characterized by better functioning, low harm potential or severity of presenting complaint, and absent suicidality or psychosis. Development of and improved access to urgent child and adolescent psychiatric outpatient care services in the community and referral agent educational programs may minimize inappropriate PPERS visits.

J Clin Psychiatry 2009;70(8):1164–1177

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Submitted: *October 29, 2008; accepted January 30, 2009 (doi:10.4088/JCP.08m04839).*

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Pediatric psychiatric emergency room service (PPERS) utilization is large and increasing in the United States.[1–3] The growing service utilization does not seem to be due to an increase in severe presentations, such as suicide attempts and psychotic disorders, but rather to a rise in nonurgent complaints that could be more appropriately managed by an outpatient mental health provider.[1] However, barriers to outpatient pediatric psychiatric services exist. These barriers include a shortage of child and adolescent psychiatrists,[4] limited insurance coverage, long waiting lists, overwhelmed families and court mental health services, and health care pressures to reduce inpatient beds and length of stays, all of which increase psychiatric emergency room (ER) visits.[5]

Few studies descriptively characterize PPERS usage, and even fewer studies have investigated the urgency of the ER contact. The descriptive studies found several characteristics associated with PPERS visits including demographic variables (female sex, older age, and Medicaid insured), illness variables (positive or negative psychiatric history, increased parental depression or mental illness, poor father-child relationship, diagnosis of adjustment disorder, depression/anxiety, attention-deficit/hyperactivity disorder [ADHD], disruptive behavior disorder, conduct disorder, or psychotic disorder), and visit variables (referral by family or medical ER; presentation on weekend, weekday, or school day; evaluation between 3 PM and 12 AM or after hours; presenting complaint of suicidal ideation/attempt or destructive behavior; precipitant of family conflict; and 3 months between repeat visits).[6–12] Only some of these characteristics have been replicated and others were clearly contradictory. The few replicated variables associated with PPERS usage included female sex, family referral, diagnosis of disruptive behavior disorder or adjustment disorder, presentation between the hours of 4 PM and 11 PM, and presenting complaint of suicidal ideation/attempt.

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Even less is known about the frequency of PPERS utilization that was necessary or seemed justified. The few studies looking at this aspect focused on the urgency or resulting inpatient admission of PPERS visits. Two studies[8,13] using the same urgency scale,[14] plus a third study using the single criterion of consultation needed within < 2 hours,[1] found the prevalence of urgent visits to range between 18% and 40%. Other studies did not rate urgency but reported on frequency (19.4%–45.0%)[1,6,7,9] and predictors of inpatient admission[15,16] instead. The predictors of urgency or inpatient admission included demographic variables (older or younger age, female sex, history of physical abuse, and social services involvement), illness variables (diagnosis of psychotic or affective disorder, diagnosis of conduct disorder or oppositional defiant disorder, and greater number of past suicide attempts), and visit variables (involuntary arrival status, presentation on a school day, presenting complaint of suicidal ideation/attempt or violent/aggressive behavior, involvement of social services, and history of physical abuse).[13,15,16] The 3 replicated predictors across these mostly incongruent reports were presenting complaint of suicidal ideation/attempt or violent/aggressive behavior and diagnosis of affective disorder.

A recent systematic review of studies examining PPERS visits concluded that the available database was slim and lacking in quality due to poor reliability, inconsistency, and an absence of standardization in data collection and reporting.[17] The authors identified the following areas that should be considered in future studies: use of defined outcomes, comprehensive data collection, multiple data sources, data reliability, resolution, and quality, as well as multivariate analyses.[17]

In summary, there exists a limited and overall incongruent database regarding characteristics and urgency of PPERS visits, suggesting a need for research that comprehensively characterizes PPERS usage. Further, despite the notion that increased PPERS utilization is largely due to nonurgent presentations,[1] studies are missing that investigated variables associated with inappropriateness of these visits. This lack of information limits the ability to identify and target areas that could reduce inappropriate PPERS visits in favor of more appropriate, lower levels of care. Although ratings of urgency and inpatient disposition status can be used as a fairly good measure of appropriate referrals, the lack of urgency or lack of inpatient admission are only very imperfect proxy measures of inappropriate PPERS utilization. A number of clinical scenarios exist for which patients appropriately need to be evaluated in the ER but do not require inpatient admission or for which urgent issues can be handled by appropriate outpatient care and do not require ER evaluation.

To bridge this knowledge gap, we conducted the current study aiming to comprehensively characterize PPERS visits and identify predictors of inappropriate visits. We hypothesized that a relevant number of pediatric patients would be inappropriately referred to the ER for nonemergent PPERS presentations that could have been handled in appropriate outpatient settings. We further hypothesized that inappropriate visits would be associated with certain demographic, illness, treatment, visit, referral, and disposition characteristics that could be targeted to address this issue. In particular, we sought to identify potential system-level problems associated with inappropriate ER utilization that could be altered to reduce nonemergent PPERS visits.

METHOD

Design and Procedures

This was a retrospective cohort study of PPERS visits by patients < 18 years old who were consecutively evaluated at the Long Island Jewish Medical Center (LIJMC) pediatric ER between January 1 and December 31, 2002. Repeat visits by the same patient were considered separate events, each representing a unique PPERS utilization pattern. Also included were visits of patients directly admitted to medical floors due to the severity of their psychiatric presentation (medically serious suicide attempt or self-mutilation). Evaluations of these patients were performed by the pediatric psychiatric consultation liaison service. These patients were included to avoid excluding the most severe PPERS visits. Seventeen PPERS visits were excluded because patients were ≥ 18 years old. This study was approved by the LIJMC Institutional Review Board.

Setting

The LIJMC is a tertiary care metropolitan hospital located in Queens, New York. It is the largest facility and the only academic teaching hospital in its catchment area, which covers Queens and parts of Brooklyn and Long Island, New York. At the time of the study, there were 2 pediatric LIJMC inpatient units and 1 day hospital program. The adolescent unit is a 23-bed facility for patients aged 13–18 years old that has approximately 450 admissions per year. The child unit is a 15-bed facility for children aged 13 and younger that accommodates approximately 80 patients per year. The child and adolescent day hospital treats about 55 patients per year, aged 7–18 years old, with a mean stay of 6–12 months. The outpatient psychiatric services at LIJMC evaluate and treat approximately 1,000 children and adolescents per year producing about 21,000 annual patient visits.

Over the past 5 years, the LIJMC general pediatric ER service has had approximately 22,625 visits per year. In 2002, there were 21,749 child and adolescent visits, of which 4.9% were evaluated by the PPERS. The ethnic distribution of children and adolescents seen at the LIJMC includes white (40.8%), black (26.2%), Hispanic (15.9%), Asian (13.0%), other (2.6%), and American Indian/Alaskan (1.4%). Children and adolescents with psychiatric problems are initially evaluated by the pediatric ER staff and then referred to the PPERS for further psychiatric evaluation. During

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Table 1. Rating Scales for Severity, Acuity, Harm Potential, and Appropriateness[a]

A. 7-Point Rating Scale	Normal = 1	Borderline = 2	Mild = 3	Moderate = 4	Marked = 5	Severe = 6	Extreme = 7
Severity							
Suicidality/homicidality	None	< 1 Passive suicidal ideation/ homicidal ideation per 14 d	1–2 Passive suicidal ideation/homicidal ideation per wk	1–2 Suicidal ideation/ homicidal ideation per wk	Daily suicidal ideation/ homicidal ideation with no plan/intent	Active suicidal ideation/ homicidal ideation with plan/intent or gesture	Suicide/homicide attempt
Aggression toward self or others	None	< 1 Verbal aggression per 14 d	1–2 Verbal aggression per wk	1–2 Aggressive ideation per wk	Daily aggressive ideation with no plan/intent	Active aggressive ideation with plan/ intent; aggressive gesture or destruction of property	Aggressive act
Acuity							
Onset of presenting complaint	> 28 d	21–27 d	14–20 d	7–13 d	3–6 d	1–2 d	≤ 24 h
Harm Potential							
Likelihood of danger to self or others	None	Borderline	Mild	Moderate	Marked	Severe	Extreme
B. 5-Point APPERC Scale	Very Inappropriate = 1	Somewhat Inappropriate = 2	Neutral = 3	Somewhat Appropriate = 4			Fully Appropriate = 5
	Outpatient evaluation/ treatment is indicated, even if contact is delayed	Outpatient evaluation/treatment is indicated in the next few days, but available resources were either not sought or not used	Outpatient evaluation/ treatment is indicated in the next few days but was not available in appropriate timeframe	Symptoms are acute and severe enough to warrant immediate evaluation but could have been handled by appropriate outpatient care			Emergency room visit and/ or hospitalization indicated and necessary

[a]Passive suicidal ideation: patient has suicidal thoughts but states that he or she does not actually want to commit suicide; suicidal ideation: patient has suicidal thoughts and states that he or she does want to commit suicide; and verbal aggression: cursing, swearing, and intimidating language.
Abbreviation: APPERC = Appropriateness of Pediatric Psychiatric Emergency Room Contact.

regular business hours, patients evaluated by the PPERS are seen by child and adolescent psychiatry fellows supervised by psychiatry attending physicians. After hours, patients are evaluated by general psychiatry residents, who are supervised by child and adolescent fellows, with additional pediatric psychiatric attending backup coverage as needed. Patients evaluated by the pediatric psychiatric consultation liaison service are always seen by child and adolescent psychiatry fellows with supervision from pediatric psychiatry attending physicians.

Data Sources and Collection

The PPERS evaluation package consists of a 1-page ER face sheet and triage form and a 12-page semistructured institutional child and adolescent clinical evaluation intake form. This comprehensive institutional intake form is used for all patients, whether or not they are admitted or discharged from the ER. The primary data source for the 18 consultations of patients directly admitted to the medical floors was a 2-page consultation form. Both the institutional intake and consultation form include in-depth data on age; sex; race; gender; insurance status; arrival mode; presenting time and date; presenting problem; precipitant; referral mode; prior outpatient consultation; current and past psychiatric history and treatment; family psychiatric history; clinical *DSM-IV* diagnoses (we excluded rule-out diagnoses); current, highest, and lowest Global Assessment of Functioning (GAF) score in the past year; and disposition/recommendation. Whenever available (486 visits, 45.8%), data from the departmental 10-page social and developmental history questionnaire, filled out by parents at the time of the PPERS visit, were used as a supplemental data source.

Outcomes

In addition to coding demographic, illness, treatment, visit, and disposition information, each PPERS visit was rated for (1) severity, (2) acuity, (3) harm potential, and (4) appropriateness. Severity, acuity, and harm potential were each rated on a 7-point scale modeled after the widely used Clinical Global Impressions (CGI) scale[18] with specific anchors provided for severity and acuity (Table 1). To determine the level of harm potential, severity and acuity of the presenting complaint, psychotic symptoms, lack of insight, and poor judgment were considered.

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Finally, patient visits were also rated for appropriateness using a new scale, the Appropriateness of Pediatric Psychiatric Emergency Room Contact (APPERC) scale (Table 1). Although 2 prior studies[8,13] used the 4-point scale by Rosenn,[14] it has not been psychometrically validated, and there are disadvantages to using this particular scale. The Rosenn scale is outdated and many present-day clinical scenarios do not fit into the anchored examples (ie, ADHD is not included and the antisocial and destructive behaviors associated with disruptive behavior disorders are all classified as "pseudoemergencies"). In addition, the Rosenn classification scale is based solely on the level of urgency with accompanying guidelines suggesting that one should use the scale in combination with an assessment of "the inherent pathogenicity of the precipitant, and the degree of reactive distress experienced by the child and/or parent,"[14(p312)] but no clear criteria are provided for this. Thus, this scale relies heavily on clinician/rater decision to determine the final classification, lacking specific criteria for harm potential or severity. Perhaps because of the ambiguities created by applying Rosenn's scale to modern-day PPERS visits, Edelsohn et al[13] seem to have used an adapted version of the Rosenn scale, leading to problematic results (eg, untreated hyperactivity and rape victim receive the same class II rating; suicidal/homicidal ideation and school refusal both receive a class III rating).

Other studies have used alternative measures to estimate the appropriateness of general pediatric ER and PPERS visits. These measures have included (1) urgency of needed treatment alone (ie, needs to be seen in < 2 hrs),[1,10,19–23] (2) need for inpatient admission,[16] (3) traditional medicosurgical rating scales,[24] and (4) physician clinical opinion with few predetermined criteria.[6] Claassen et al[25] compared 3 appropriateness rating systems for adult psychiatric ER visits: medicosurgical criteria, physician opinion, and the need for inpatient admission, finding large discrepancies and no significant correlation between rating methods. On the other hand, studies have demonstrated that immediate dangerousness and presence of behavioral dyscontrol,[25] as well as suicidality[6,15,16] and psychotic behavior,[13] were all associated with appropriate ER visits. Based on the lack of a reliable rating measure for appropriateness of PPERS, we created a new 5-point, anchored appropriateness rating scale. The APPERC scale takes into consideration the availability and level of service needed based on the severity, acuity, and harm potential of the patient and was modeled after the widely used CGI.[18] This appropriateness scale was intended to be broad enough so that all visits could be rated without ambiguity. This scale also addresses the importance of whether or not the patient had current and available outpatient resources.

Finally, data quality was rated on a simple, 3-point scale: 1 = poor, 2 = intermediate, and 3 = adequate. Data quality was judged on level of completeness, reliability between data sources, ambiguity in documentation, and legibility. All data rated as poor quality were reviewed by the last author (C.U.C.), and any ambiguous data were treated as missing data and not included in the analysis. The mean ± SD rating for data quality was 2.4 ± 0.7 with 51.9% of data sources rated as adequate, 33.0% as intermediate, and 15.2% as poor (ie, containing only a modest degree of usable data).

Data sources were evaluated, coded, and entered by a team of raters from the medical student to the child and adolescent psychiatry fellow level supervised by the last author (C.U.C.). There were daily meetings between the team of raters and last author to review rating procedures and evaluate data that did not conform tightly to the provided anchors. The final data cross-checking, cleaning, and quality-assurance procedures were performed by the first and last authors (E.C.S. and C.U.C.), a fourth-year medical student with 3 years of psychiatric research experience and a board-certified child and adolescent research psychiatrist, respectively.

Data Analysis

The initial 5-point appropriateness ratings were dichotomized for the analyses in this report: somewhat/very inappropriate (2 and 1) versus all other ratings that included fully/somewhat appropriate and neutral (5, 4, and 3, respectively). This dichotomization was done to focus the final analysis on our comparison of interest, ie, the correlates of inappropriate PPERS visits. This grouping still takes advantage of the more fine-grained 5-point rating system, allowing for a more conclusive contrast. Data were analyzed with *t* test and χ^2 test for continuous and categorical variables, respectively. For group comparisons, analysis of variance was employed. All tests were 2-sided, with an α set at .05. Due to multiple comparisons, a Bonferroni correction was utilized for univariate comparisons of clusters of variables (eg, 5 racial groups: $P < .05/5 = P < .01$, 11 diagnostic groups: $P < .05/11 = P < .0045$, etc). This analysis was done to reduce the effect of chance due to multiple testing and to still allow for comparison with prior studies reporting univariate analyses results.

All variables that had *P* values ≤ .1 in univariate analyses were entered into 2 separate backward-elimination multiple-regression analyses. The first multiple regression analysis was conducted with the aggregate ratings of acuity, severity, and harm potential to test how predictive these utilized ratings were in identifying inappropriate ER visits. Because these aggregate ratings were scored by the same rater who determined appropriateness, we conducted a second multiple regression analysis excluding these variables. In multivariate analyses, school referral dropped out of the final model. However, school was the second-largest referral source (29.7%) and was strongly associated with inappropriate PPERS visits ($P = .0012$), and referral to the PPERS by school was the main rater-determined reason for suboptimal care ($P = .0056$). Therefore, we conducted an additional multivariate sensitivity analysis to examine characteristics

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Table 2. Demographic Characteristics of 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room Service

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	Statistic	*P* Value[b]
Male, no. (%)	543 (51.1)	199 (54.5)	344 (49.4)	$\chi^2 = 2.56$	.1097
Age, mean ± SD, y	13.5 ± 3.1	13.4 ± 3.2	13.6 ± 3.0	$F = 1.28$	.2582
Age, no. (%)				$\chi^2 = 0.02$	.9900
13–17 y	673 (63.4)	231 (63.3)	442 (63.4)	$\chi^2 = 0.002$	.9675
6–12 y	378 (35.6)	130 (35.6)	248 (35.6)	$\chi^2 = 0.00$	.9909
≤ 5 y	11 (1.0)	4 (1.1)	7 (1.0)	$\chi^2 = 0.02$	.8887
Ethnicity, no. (%)[c]				$\chi^2 = 14.35$	**.0064**
White	495 (51.2)	154 (45.6)	341 (54.3)	$\chi^2 = 6.71$	**.0096**
Black	307 (31.8)	119 (35.2)	188 (29.9)	$\chi^2 = 2.82$	.0933
Hispanic	104 (10.8)	47 (13.9)	57 (9.1)	$\chi^2 = 5.33$	.0209
Asian	41 (4.2)	9 (2.7)	32 (5.1)	$\chi^2 = 3.22$	.0729
Other	19 (2.0)	9 (2.7)	10 (1.6)	$\chi^2 = 1.31$	.2532
Living in foster care, no. (%)[d]	78 (8.6)	19 (6.6)	59 (9.5)	$\chi^2 = 2.22$	.1366
Adopted, no. (%)[d]	89 (9.8)	26 (9.0)	63 (10.2)	$\chi^2 = 0.32$	.5715
Insurance status, no. (%)[e]				$\chi^2 = 0.14$	.9308
Private/managed care	488 (67.4)	152 (66.7)	336 (67.7)	$\chi^2 = 0.08$	.7743
Medicaid	164 (22.7)	52 (22.8)	112 (22.6)	$\chi^2 = 0.01$	.9461
None	72 (9.9)	24 (10.5)	48 (9.7)	$\chi^2 = 0.13$	.7229
Psychiatric family history, no. (%)[f]	471 (58.5)	153 (54.3)	318 (60.8)	$\chi^2 = 3.24$	.0721
Special education, no. (%)[g]	266 (31.2)	88 (30.7)	178 (31.5)	$\chi^2 = 0.06$	.8020
Current or past sexual abuse, no. (%)[h]	96 (9.2)	22 (6.1)	74 (10.8)	$\chi^2 = 6.26$	**.0123**
Current or past physical abuse, no. (%)[i]	133 (12.8)	38 (10.6)	95 (13.9)	$\chi^2 = 2.36$	.1244
Current or past ACS involvement, no. (%)[j]	83 (7.8)	26 (7.1)	57 (8.2)	$\chi^2 = 0.39$	.5347

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating either missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]966 total, 338 somewhat/very inappropriate, and 628 somewhat/fully appropriate or neutral.
[d]910 total, 290 somewhat/very inappropriate, and 620 somewhat/fully appropriate or neutral.
[e]724 total, 228 somewhat/very inappropriate, and 496 somewhat/fully appropriate or neutral.
[f]805 total, 282 somewhat/very inappropriate, and 523 somewhat/fully appropriate or neutral.
[g]852 total, 287 somewhat/very inappropriate, and 565 somewhat/fully appropriate or neutral.
[h]1,044 total; 360 somewhat/very inappropriate; and 684 somewhat/fully appropriate or neutral.
[i]1,041 total; 359 somewhat/very inappropriate; and 682 somewhat/fully appropriate or neutral.
[j]1,060 total; 365 somewhat/very inappropriate; and 695 somewhat/fully appropriate or neutral.
Abbreviation: ACS = Administration of Children's Services.

that distinguished school referrals from all other referral sources.

RESULTS

Sample Demographics

This study included 1,062 PPERS visits between January 1 and December 31, 2002, by 966 children and adolescents. Of these 1,062 visits, 96 were repeat visits (ie, 1 repeat: 74 visits, 2 repeats: 17 visits, 3 repeats: 3 visits, and 4 repeats: 2 visits). Eighteen visits consisted of patients evaluated by the psychiatric consultation and liaison service on the day of or the day after admission to the medical floor due to the medical severity of their psychiatric presentation (ie, suicide attempt or severe self-injurious behavior). On average, 2.9 children and adolescents (range, 0–10; median: 3; mode: 2) were evaluated by the PPERS per day. Patients were 51.1% male and a mean ± SD of 13.5 ± 3.1 years old (range, 3–17 years; ≤ 5 years: 1.0%; 6–12 years: 35.6%; and 17 years: 63.4%) (Table 2). Most patients with known ethnicity (966 visits) were white (51.2%) or black (31.8%), followed by Hispanic (10.8%), Asian (4.2%), and other (2.0%), matching the ethnic distribution of all pediatric visits to LIJMC (see Method). The majority of patients with available insurance information (724 visits) had private health insurance (67.4%), followed by Medicaid (22.7%), and 9.9% had no health coverage. A total of 58.5% of patient visits had a family psychiatric history, 31.2% were in special education, 9.8% were adopted, and 8.6% were in foster care. A minority of patient visits had a history of current or past physical abuse (12.8%), sexual abuse (9.2%), and involvement by the Administration of Children's Services (ACS) (7.8%), an agency in New York, New York created to protect children from abuse and neglect.

Illness and Treatment Characteristics

Patients had a mean ± SD of 1.8 ± 1.0 (range, 0–8) psychiatric diagnoses (1,062 visits) (Table 3). The most common primary psychiatric diagnosis was a mood disorder (43.0%), ie, depressive disorders (23.6%), mood disorder not otherwise specified (12.2%), or bipolar disorder (7.2%). Other primary diagnoses included ADHD (15.8%), disruptive behavior disorders (12.4%), adjustment disorder (12.0%), anxiety disorders (4.3%), schizophrenia spectrum disorders (4.0%), pervasive developmental disorders (3.0%), lifetime substance abuse/dependence disorders (2.2%), and other

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Table 3. Illness Characteristics of 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room Service

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	Statistic	*P* Value[b]
No. of psychiatric diagnoses, mean ± SD	1.8 ± 1.0	1.7 ± 0.9	1.8 ± 1.0	$F = 8.28$	**.0041**
Primary psychiatric diagnosis, no. (%)[c]				$\chi^2 = 48.75$	**<.0001**
Depression	250 (23.6)	78 (21.4)	172 (24.7)	$\chi^2 = 1.40$	.2365
Attention-deficit/hyperactivity disorder	168 (15.8)	65 (17.9)	103 (14.8)	$\chi^2 = 1.70$	.1921
Disruptive behavioral disorders	131 (12.4)	38 (10.4)	93 (13.3)	$\chi^2 = 1.86$	.1723
Mood disorder not otherwise specified	129 (12.2)	43 (11.8)	86 (12.3)	$\chi^2 = 0.06$	.8037
Adjustment disorder	127 (12.0)	67 (18.4)	60 (8.6)	$\chi^2 = 21.79$	**<.0001**
Bipolar disorder	76 (7.2)	11 (3.0)	65 (9.3)	$\chi^2 = 14.29$	**.0002**
Anxiety disorder	46 (4.3)	16 (4.4)	30 (4.3)	$\chi^2 = 0.01$	.9446
Schizophrenia spectrum disorder	42 (4.0)	6 (1.7)	36 (5.2)	$\chi^2 = 7.78$	.0053
Other disorder[d]	37 (3.5)	18 (5.0)	19 (2.7)	$\chi^2 = 3.50$	.0614
Pervasive developmental disorders	32 (3.0)	14 (3.9)	18 (2.6)	$\chi^2 = 1.31$	.2532
Lifetime substance abuse/dependence disorders	23 (2.2)	8 (2.2)	15 (2.2)	$\chi^2 = 0.002$	.9613
Comorbid lifetime substance abuse/dependence disorders, no. (%)[e]	108 (10.2)	28 (7.7)	80 (11.5)	$\chi^2 = 3.9$	**.0479**
Current Global Assessment of Functioning (GAF) score, mean ± SD[f]	47.7 ± 11.8	53.9 ± 8.6	44.2 ± 13.2	$F = 156.21$	**<.0001**
Current GAF—lowest GAF score within past 12 mo, mean ± SD[g]	2.3 ± 8.1	3.5 ± 7.1	1.7 ± 8.5	$F = 10.58$	**.0014**
Current GAF score—highest GAF score within past 12 mo, mean ± SD[h]	−14.9 ± 10.6	−10.5 ± 7.2	−17.3 ± 12.0	$F = 77.19$	**<.0001**
Past suicide attempt, no. (%)[i]	132 (12.8)	26 (7.4)	106 (15.7)	$\chi^2 = 14.40$	**.0001**
Past self-injurious behavior, N (%)[j]	186 (19.0)	43 (12.5)	143 (22.5)	$\chi^2 = 14.25$	**.0002**

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating either missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]1,061 total.
[d]Other primary diagnoses: no diagnosis given (10 visits), eating disorder (7 visits), parent-child relationship problems (6 visits), Tourette's disorder (3 visits), grief reaction (2 visits), personality disorder (2 visits), nightmare disorder (2 visits), mutism (1 visit), amnesia disorder not otherwise specified (1 visit), delirium (1 visit), language disorder (1 visit), encopresis (1 visit), conversion disorder (1 visit), and pseudoseizures (1 visit).
[e]1,058 total; 365 somewhat/very inappropriate; and 693 somewhat/fully appropriate or neutral.
[f]1,013 total; 357 somewhat/very inappropriate; and 656 somewhat/fully appropriate or neutral.
[g]868 total, 296 somewhat/very inappropriate, and 572 somewhat/fully appropriate or neutral.
[h]841 total, 287 somewhat/very inappropriate, and 554 somewhat/fully appropriate or neutral.
[i]1,028 total; 353 somewhat/very inappropriate; and 675 somewhat/fully appropriate or neutral.
[j]980 total, 343 somewhat/very inappropriate, and 637 somewhat/fully appropriate or neutral.

disorders (3.5%). Lifetime substance abuse/dependence was more prevalent as a comorbid disorder (10.2%). Past self-destructive behaviors and past suicide attempts were reported in 19.0% and 12.8% of visits, respectively. The mean ± SD current clinician-rated GAF score was 47.7 ± 11.8, which was on average 2.3 ± 8.1 points higher than the lowest GAF score and 14.9 ± 10.6 points lower than the highest GAF score in the past 12 months.

A total of 19.1% of patients had previous psychiatric ER visits, and 27.4% of patients had previous inpatient psychiatric treatment (Table 4). The majority of children and adolescents were in current psychiatric outpatient care (68.7%) with a psychiatrist (46.6%), therapist (41.1%), school counselor (15.2%), and/or primary care physician (13.7%). About half of patients (51.0%) were receiving current psychopharmacotherapy with a mean ± SD of 0.9 ± 1.2 (range, 0–6) medications. The main prescribed psychotropic medication classes included antidepressants (24.9%), ie, selective serotonin reuptake inhibitors (SSRIs) (20.3%) and novel antidepressants (5.8%); antipsychotics (22.1%), mainly second-generation antipsychotics (21.6%); mood stabilizers (14.3%); psychostimulants (14.0%); anxiolytics (5.3%); and α_2 agonists (1.8%). Current treatment with typical antipsychotics (0.9%), anticholinergics (0.7%), antihistamines (0.5%), and tricyclic antidepressants (0.2%) was negligible. Only 9.8% of patients were receiving current nonpsychotropic pharmacotherapy with a mean ± SD of 0.18 ± 0.8 medications.

Visit Characteristics

Arrival time for PPERS visits was most often between 12 pm and 5 pm (37.1%) and 5 pm and 10 pm (33.5%), while fewer patients arrived between 10 pm and 9 am (19.3%) or 9 am and 12 pm (10.2%) (Table 5). The PPERS visits occurred more frequently on a weekday (82.1%) or school day (66.7%). Most children and adolescents were brought to the PPERS by their family, self, or friend (83.8%) and less often by emergency medical services (EMS) or the New York City police department (13.4%). The leading clinician-rated presenting complaints were suicidal ideation/attempt (29.0%), defiance (23.7%), and aggression (21.7%), followed by depression/anxiety (11.8%), self-mutilation (5.2%), psychosis (4.9%), and other reasons (3.8%). In 54.5% of visits, the presentation was judged to be an exacerbation of a preexisting psychiatric problem. Identifiable precipitants were present in 55.1% of patients, including family conflict (29.7%), peer conflict (10.4%), school conflict (4.6%), trauma (4.6%), other (3.0%), and treatment nonadherence (2.8%).

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Table 4. Treatment Characteristics of 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room Service

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	Statistic	*P* Value[b]
Psychiatric treatment, no. (%)					
History of psychiatric emergency room visit[c]	172 (19.1)	36 (12.3)	136 (22.4)	$\chi^2 = 12.86$	**.0003**
History of inpatient psychiatric treatment[d]	281 (27.4)	66 (19.0)	215 (31.6)	$\chi^2 = 18.35$	**<.0001**
Current outpatient psychiatric treatment[e]	718 (68.7)	235 (64.6)	483 (70.9)	$\chi^2 = 4.47$	.0345
Current outpatient treatment with psychiatrist[f]	486 (46.6)	147 (40.5)	339 (49.8)	$\chi^2 = 8.20$	**.0042**
Current outpatient treatment with therapist[g]	430 (41.1)	133 (36.7)	297 (43.4)	$\chi^2 = 4.36$	.0367
Current outpatient treatment with school counselor[h]	158 (15.2)	65 (18.2)	93 (13.7)	$\chi^2 = 3.69$	.0549
Current outpatient psychiatric treatment with primary care physician[i]	142 (13.7)	54 (15.0)	88 (12.9)	$\chi^2 = 0.88$	.3486
Psychopharmacologic treatment					
Current psychotropic medication use, no. (%)[j]	542 (51.0)	159 (43.6)	383 (55.0)	$\chi^2 = 12.43$	**.0004**
No. of current psychotropic medications, mean ± SD[k]	0.9 ± 1.2	0.7 ± 1.1	1.0 ± 1.3	$F = 18.46$	**<.0001**
Current nonpsychotropic medication use, no. (%)[k]	104 (9.8)	27 (7.4)	77 (11.1)	$\chi^2 = 3.64$	.0564
No. of nonpsychotropic medications, mean ± SD[k]	0.2 ± 0.8	0.2 ± 0.9	0.2 ± 0.8	$F = 0.61$	.4376
Psychotropic medication, no. (%)[k]					
Antipsychotic	234 (22.1)	59 (16.2)	175 (25.1)	$\chi^2 = 11.23$	**.0008**
First-generation antipsychotic	9 (0.9)	1 (0.3)	8 (1.2)	$\chi^2 = 2.18$	.1396
Second-generation antipsychotic	229 (21.6)	57 (15.6)	172 (24.7)	$\chi^2 = 11.71$	**.0006**
Antidepressant	264 (24.9)	72 (19.7)	192 (27.6)	$\chi^2 = 7.91$	**.0049**
Selective serotonin reuptake inhibitor	215 (20.3)	58 (15.9)	157 (22.6)	$\chi^2 = 6.59$	.0103
Tricyclic antidepressant	2 (0.2)	0 (0.0)	2 (0.3)	$\chi^2 = 1.05$	.3053
Novel antidepressant	62 (5.8)	22 (6.0)	40 (5.8)	$\chi^2 = 0.03$	.8533
Mood stabilizer	152 (14.3)	37 (10.1)	115 (16.5)	$\chi^2 = 7.96$	**.0048**
Stimulant	148 (14.0)	43 (11.8)	105 (15.1)	$\chi^2 = 2.18$	.1399
Anxiolytic/hypnotic	56 (5.3)	14 (3.8)	42 (6.0)	$\chi^2 = 2.32$	.1281
α_2 agonist	19 (1.8)	3 (0.8)	16 (2.3)	$\chi^2 = 2.97$	.0848
Antihistamine	5 (0.5)	2 (0.6)	3 (0.4)	$\chi^2 = 0.07$	.7917
Anticholinergic	7 (0.7)	2 (0.6)	5 (0.7)	$\chi^2 = 0.11$	.7446

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating either missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]900 total, 292 somewhat/very inappropriate, and 608 somewhat/fully appropriate or neutral.
[d]1,027 total; 347 somewhat/very inappropriate; and 680 somewhat/fully appropriate or neutral.
[e]1,045 total; 364 somewhat/very inappropriate; and 681 somewhat/fully appropriate or neutral.
[f]1,044 total; 363 somewhat/very inappropriate; and 681 somewhat/fully appropriate or neutral.
[g]1,046 total; 362 somewhat/very inappropriate; and 684 somewhat/fully appropriate or neutral.
[h]1,039 total; 358 somewhat/very inappropriate; and 681 somewhat/fully appropriate or neutral.
[i]1,039 total; 359 somewhat/very inappropriate; and 680 somewhat/fully appropriate or neutral.
[j]1,062 total; 365 somewhat/very inappropriate; and 696 somewhat/fully appropriate or neutral.
[k]1,061 total; 365 somewhat/very inappropriate; and 696 somewhat/fully appropriate or neutral.

Referral and Disposition

Patients were referred to the ER by their family/self (54.0%), school (23.8%), therapist (9.3%), psychiatrist (5.1%), others (4.1%), and nonpsychiatric physician (3.8%) (Table 6). Only 21.9% of patients sought a psychiatric outpatient evaluation before the PPERS visit. Of these, 69.4% were follow-up evaluations with their current outpatient provider, and 30.6% were first-time evaluations. However, only 52.6% of these evaluations actually occurred. The few completed evaluations occurred on either the same day or 1 day prior to the ER visit.

Acute inpatient admission was required in 28.7% of patient visits (ie, 89.4% psychiatric and 10.6% medical). Discharged patients (71.3%) were sent home (94.4%), to a group home (2.7%), or to a day hospital (2.3%). The majority of outpatient referrals were made for treatment with a psychiatrist (47.5%) or therapist (42.9%) and much less often with a nonpsychiatric physician (2.5%) or other health professional (1.2%).

Appropriateness of PPERS Visits

Approximately one third or 365 (34.4%) visits were rated as somewhat/very inappropriate (Table 7); the remaining 697 (65.6%) visits were rated as neutral (69 visits, 6.5%), somewhat appropriate (214 visits, 20.1%), or fully appropriate (414 visits, 39.0%). The rater-derived ideal care for all PPERS visits was outpatient psychiatrist or primary care physician (45.1%), ER (42.2%), or outpatient therapist (12.7%). The reasons for suboptimal care included outpatient appointment not sought by family (52.8%); patient directly referred to ER (40.2%), ie, by school (24.3%), outpatient mental health provider (9.1%), or other agent (6.8%); and outpatient appointment not available in the desired/required timeframe (7.0%).

Correlates of Inappropriate PPERS Visits in Univariate Analyses

Significant demographic characteristics of inappropriate PPERS visits were nonwhite race ($P = .0096$) and absent

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Table 5. Visit Characteristics of 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room Service

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	χ^2	*P* Value[b]
Arrival time, no. (%)[c]				1.67	.4449
12 pm–5 pm	258 (37.1)	88 (40.6)	170 (35.5)	1.64	.2002
5 pm–10 pm	233 (33.5)	65 (30.0)	168 (35.1)	1.76	.1850
10 pm–9 am	134 (19.3)	44 (20.3)	90 (18.8)	0.24	.6248
9 am–12 pm	71 (10.2)	20 (9.2)	51 (10.7)	0.34	.5635
Arrival day, no. (%)[d]					
School day vs vacation/weekend	708 (66.7)	244 (67.0)	464 (66.6)	0.02	.8795
Weekday vs weekend	871 (82.1)	299 (82.1)	572 (82.1)	0.001	.9753
Arrival mode, no. (%)[e]				0.02	**.0165**
Family/self/friend	851 (83.8)	307 (88.0)	544 (81.7)	6.68	**.0098**
EMS/NYPD	136 (13.4)	32 (9.2)	104 (15.6)	8.20	**.0042**
Agency/school/therapist/inpatient physician	28 (2.8)	10 (2.9)	18 (2.7)	0.02	.8806
Clinician-rated presenting complaint, no. (%)[f]				98.34	**<.0001**
Suicidal ideation/attempt	308 (29.0)	65 (17.9)	243 (34.9)	33.57	**<.0001**
Defiance	251 (23.7)	128 (35.2)	123 (17.7)	40.63	**<.0001**
Aggression	230 (21.7)	58 (15.9)	172 (24.7)	10.77	**.0010**
Depression/anxiety	125 (11.8)	67 (18.4)	58 (8.3)	23.40	**<.0001**
Self-injurious behavior	55 (5.2)	17 (4.7)	38 (5.5)	0.30	.5856
Psychosis	52 (4.9)	8 (2.2)	44 (6.3)	8.69	**.0032**
Other	40 (3.8)	21 (5.8)	19 (2.7)	6.10	.0135
Exacerbation of preexisting condition, no. (%)	579 (54.5)	195 (53.4)	384 (55.1)	0.27	.6040
Identifiable precipitant, no. (%)[g]				12.32	.0553
None	473 (44.8)	149 (40.9)	324 (46.8)	3.27	.0706
Family conflict	314 (29.7)	112 (30.8)	202 (29.2)	0.30	.5838
Peer conflict	110 (10.4)	38 (10.4)	72 (10.4)	0.001	.9798
School conflict	49 (4.6)	26 (7.1)	23 (3.3)	7.89	**.0050**
Trauma	49 (4.6)	15 (4.1)	34 (4.9)	0.33	.5639
Other	32 (3.0)	15 (4.1)	17 (2.5)	2.26	.1327
Treatment nonadherence	30 (2.8)	9 (2.5)	21 (3.0)	0.27	.6038

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating either missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]696 total, 217 somewhat/very inappropriate, and 479 somewhat/fully appropriate or neutral.
[d]1,061 total; 364 somewhat/very inappropriate; and 697 somewhat/fully appropriate or neutral.
[e]1,015 total; 349 somewhat/very inappropriate; and 666 somewhat/fully appropriate or neutral.
[f]1,061 total; 364 somewhat/very inappropriate; and 697 somewhat/fully appropriate or neutral.
[g]1,057 total; 364 somewhat/very inappropriate; and 693 somewhat/fully appropriate or neutral.
Abbreviations: EMS = emergency medical service, NYPD = New York Police Department.

sexual abuse history (*P* = .0123). Illness characteristics included higher current GAF scores (*P* < .0001), primary diagnosis of adjustment disorder (*P* < .0001), fewer past episodes of suicide attempts (*P* = .0001) or self-injurious behavior (*P* = .0002), lack of bipolar disorder (*P* = .0002), fewer total number of psychiatric diagnoses (*P* = .0041), and absent comorbid lifetime substance abuse/dependence disorder (*P* = .0479).

Significant treatment characteristics of inappropriate visits included fewer past inpatient psychiatric hospitalizations (*P* < .0001) and PPERS visits (*P* = .0003) and lack of current outpatient treatment (*P* = .0345), specifically with a psychiatrist (*P* = .0042) or therapist (*P* = .0367). Patients were less likely to have current psychopharmacologic treatment (*P* = .0004), and if treated, they were prescribed a lower mean number of psychotropic medications (*P* < .0001). Current treatment with an antipsychotic (*P* = .0008), specifically second-generation antipsychotic (*P* = .0006); mood stabilizer (*P* = .0048); and antidepressant (*P* = .0049), specifically SSRI (*P* = .0103), was also less likely.

Visit characteristics included clinician-rated presenting complaint of defiance or depression/anxiety (*P* < .0001); lack of presenting complaint of suicidal ideation/attempt (*P* < .0001), aggression (*P* = .0010), or psychosis (*P* = .0032); lack of transport to PPERS by EMS/police (*P* = .0042); and transport to the PPERS by family (*P* = .0098).

The referring agent of inappropriate visits was less likely the outpatient psychiatrist (*P* = .0003) and more likely the patient's school (*P* = .0012). If patients sought an outpatient evaluation prior to the PPERS visits, it was more likely an initial visit to the provider (*P* = .0040); patients were less likely to complete the evaluation (*P* = .0442) and less likely to seek an evaluation at all (*P* = .0475). Regarding disposition, inappropriate PPERS visits were more likely to be referred to outpatient care (*P* < .0001) with a psychiatrist or therapist (*P* < .0001).

Inappropriate visits were found to have significantly lower ratings of acuity, severity, and harm potential (all: *P* < .0001). Rater-suggested ideal care for these patients was significantly more likely to be outpatient psychiatrist/primary care physician or therapist (*P* < .0001). The main

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Table 6. Referral and Disposition Patterns in 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room Service (PPERS)

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	χ^2	*P* Value[b]
Referring agent, no. (%)[c]				23.09	**.0003**
Family/self	560 (54.0)	180 (50.4)	380 (55.8)	2.73	.0985
School	247 (23.8)	106 (29.7)	141 (20.7)	10.43	**.0012**
Therapist	97 (9.3)	33 (9.2)	64 (9.4)	0.01	.9354
Psychiatrist	53 (5.1)	6 (1.7)	47 (6.9)	13.18	**.0003**
Other	42 (4.1)	18 (5.0)	24 (3.5)	1.39	.2385
Nonpsychiatrist physician	39 (3.8)	14 (3.9)	25 (3.7)	0.04	.8402
Outpatient evaluation sought before PPERS visit, no. (%)[d]	232 (21.9)	67 (18.4)	165 (23.7)	3.93	**.0475**
Initial evaluation vs follow-up, no. (%)[e]	66 (30.6)	26 (45.6)	40 (25.2)	8.28	**.0040**
Evaluation sought with the following, no. (%)[f]				6.93	.0741
Psychiatrist	87 (38.8)	18 (27.7)	69 (43.4)	4.79	.0286
Therapist	75 (33.5)	22 (33.9)	53 (33.3)	0.01	.9412
School counselor	38 (17.0)	16 (24.6)	22 (13.8)	3.81	.0511
Primary care physician	24 (10.7)	9 (13.9)	15 (9.4)	0.94	.3326
Evaluation completed, no. (%)	122 (11.5)	32 (8.8)	90 (12.9)	4.05	**.0442**
Patient disposition (inpatient vs outpatient), no. (%)	305 (28.7)	10 (2.7)	295 (42.3)	183.36	**<.0001**
Outpatient disposition, no. (%)[g]				2.65	.2660
Home	708 (94.4)	335 (95.4)	373 (93.5)	1.35	.2446
Group home	20 (2.7)	11 (3.1)	9 (2.3)	0.56	.4563
Day hospital	17 (2.3)	5 (1.4)	12 (3.0)	2.11	.1461
Referral to outpatient psychiatrist, no. (%)[h]	502 (47.5)	238 (65.4)	264 (38.1)	71.27	**<.0001**
Referral to outpatient therapist, no. (%)[i]	453 (42.9)	238 (65.6)	215 (31.0)	116.02	**<.0001**
Referral to outpatient nonpsychiatrist physician, no. (%)[h]	26 (2.5)	11 (3.0)	15 (2.2)	0.73	.3924
Referral to other health professional, no. (%)[h]	13 (1.2)	4 (1.1)	9 (1.3)	0.08	.7794

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]1,038 total; 357 somewhat/very inappropriate; and 681 somewhat/fully appropriate or neutral.
[d]1,060 total; 364 somewhat/very inappropriate; and 696 somewhat/fully appropriate or neutral.
[e]216 total, 57 somewhat/very inappropriate, and 159 somewhat/fully appropriate or neutral.
[f]224 total, 65 somewhat/very inappropriate, and 159 somewhat/fully appropriate or neutral.
[g]745 total, 351 somewhat/very inappropriate, and 394 somewhat/fully appropriate or neutral.
[h]1,057 total; 364 somewhat/very inappropriate; and 693 somewhat/fully appropriate or neutral.
[i]1,056 total; 363 somewhat/very inappropriate; and 693 somewhat/fully appropriate or neutral.

rater-determined reason for suboptimal care was direct referral to the PPERS by the patient's school ($P = .0056$).

Multivariate Correlates of Inappropriate PPERS Visits

Two final multivariate models predicting inappropriate PPERS visits were identified. (1) Model with aggregate ratings of severity, acuity, and harm potential of presenting complaint (1,012 visits, $r^2 = .296$, $P < .0001$): higher current GAF score (> 48, $P < .0001$), lack of suicidal ideation/attempt as presenting complaint ($P < .0001$), lower harm potential of presenting complaint (< 4.4, $P < .0001$), absence of psychosis as presenting complaint ($P = .0008$), and lower severity of presenting complaint (< 4.8, $P = .0136$). (2) Model without aggregate ratings of severity, acuity, and harm potential of the presenting complaint (803 visits, $r^2 = .21$, $P < .0001$): higher current GAF score (> 48) ($P < .0001$), primary diagnosis of depression/anxiety ($P < .000l$), presenting complaint of defiance ($P < .0001$), arrival mode of family/friend/self ($P = .0005$), diagnosis of adjustment disorder ($P = .0047$), lack of history of past self-destructive behavior ($P = .014$), lack of history of sexual abuse ($P = .017$), nonwhite race ($P = .018$), and lack of referral by psychiatrist ($P = .022$).

Multivariate Sensitivity Analysis of School Referral

The following models were found to predict school referral. (1) Model with aggregate ratings of severity, acuity, and harm potential of presenting complaint (903 visits, $r^2 = .15$, $P < .0001$): younger age (< 14 years) ($P < .0001$), lower rating of severity (< 4.8) ($P = .0039$), treatment with fewer total number of current psychotropic medications ($P = .0002$), Asian race ($P = .0003$), presenting complaint of suicidal ideation/attempt ($P = .0004$), higher acuity rating (> 5.6) ($P = .0034$), nonwhite race ($P = .0070$), and higher GAF score (> 48) ($P = .034$). (2) Model without aggregate ratings of severity, acuity, and harm potential of presenting complaint (905 visits, $r^2 = .13$, $P < .0001$): younger age (< 14 years) ($P < .0001$), treatment with fewer total number of current psychotropic medications ($P < .0001$), presenting complaint of suicidal ideation/attempt ($P = .0002$), higher GAF score (> 48) ($P = .0007$), Asian race ($P = .0007$), nonwhite race ($P = .0012$), and outpatient evaluation not sought ($P = .048$).

DISCUSSION

This retrospective cohort study adds to the body of literature describing patient and visit characteristics related to

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Table 7. Ratings of Acuity, Severity, Harm Potential, and Appropriateness for 1,062 Children and Adolescent Patient Visits to a Pediatric Psychiatric Emergency Room (ER) Service

Baseline Characteristic[a]	Total (1,062 visits)	Somewhat/Very Inappropriate (365 visits)	Somewhat/Fully Appropriate or Neutral (697 visits)	Statistic	*P* Value[b]
Symptom acuity, mean ± SD[c]	5.6 ± 1.9	5.3 ± 2.1	5.8 ± 1.8	$F = 16.36$	**< .0001**
Symptom severity, mean ± SD	4.8 ± 1.4	3.7 ± 1.5	5.4 ± 1.4	$F = 338.08$	**< .0001**
Harm potential, mean ± SD	4.4 ± 1.6	3.1 ± 1.6	5.1 ± 1.5	$F = 388.71$	**< .0001**
Ideal care, no. (%)[d]				$\chi^2 = 400.57$	**< .0001**
Psychiatrist or primary care physician	442 (45.1)	263 (75.4)	179 (28.4)	$\chi^2 = 200.40$	**< .0001**
ER	414 (42.2)	0 (0.0)	414 (65.6)	$\chi^2 = 396.47$	**< .0001**
Therapist	124 (12.7)	86 (24.6)	38 (6.0)	$\chi^2 = 70.5$	**< .0001**
Reasons for suboptimal care, no. (%)[e]				$\chi^2 = 15.53$	**.0037**
No appointment sought	289 (52.8)	180 (53.7)	109 (51.4)	$\chi^2 = 0.28$	.5970
School: "go to ER"	133 (24.3)	95 (28.4)	38 (17.9)	$\chi^2 = 7.68$	**.0056**
Mental health provider: "go to ER"	50 (9.1)	24 (7.2)	26 (12.3)	$\chi^2 = 4.07$	.0438
No appointment available	38 (7.0)	17 (5.1)	21 (9.9)	$\chi^2 = 4.69$	.0304
Other referred to ER[f]	37 (6.8)	19 (5.7)	18 (8.5)	$\chi^2 = 1.64$	.2009

[a]Some variables contain a total analysis of fewer than 1,062 patient visits, indicating either missing or unknown data.
[b]Bolded values indicate statistical significance.
[c]1,058 total; 362 somewhat/very inappropriate; and 696 somewhat/fully appropriate or neutral.
[d]980 total, 349 somewhat/very inappropriate, and 631 somewhat/fully appropriate or neutral.
[e]547 total, 335 somewhat/very inappropriate, and 212 somewhat/fully appropriate or neutral.
[f]Referred to ER by school, psychiatrist, primary care physician, therapist, New York Police Department, or other.

pediatric psychiatric ER utilization. In addition to these descriptive results, the core findings of this study are (1) more than one third of PPERS visits were considered inappropriate, in that they could have been dealt with by outpatient care, even if the contact would have been delayed; (2) ongoing outpatient care, present in more than two thirds of patients, was utilized infrequently (ie, by only 21.9%) prior to presenting to the ER; (3) the main reasons for inappropriate PPERS visits were direct ER referral from school ($P = .0056$) or mental health provider ($P = .044$) without prior psychiatrist evaluation, or unavailable appointment ($P = .030$); and (4) multivariate predictors of inappropriate PPERS visits included current GAF score > 48, absent suicidal ideation/attempt, low harm potential and severity of presenting complaint, and absent psychosis.

Among the patient, clinical, and visit characteristics of the examined PPERS visits, the characteristics that replicated existing data include older age, family psychiatric history, diagnosis of ADHD and disruptive behavior disorder, family referral, school day presentation, presenting complaint of suicidal ideation/attempt, and arrival time between 12 pm and 10 pm. These results suggest that visits are most likely triggered by the stresses and interactions related to school[12] and that children with a family history of mental illness or a diagnosis of behavioral or hyperactivity disorder or those in adolescence may be more vulnerable to that stress. Family referral to the ER and presenting complaint of suicidality are consistently present in the literature and thus may be considered strong predictors of PPERS visits.[6,8,10,16]

Importantly, as many as 34.4% of our sample were rated as somewhat or very inappropriate PPERS visits that should have instead occurred in outpatient care, even with delayed contact. This number falls in the upper range of the existing frequency data on nonurgent PPERS visits (18%–40%).[1,8,13] Although pathways to inappropriate ER visits in general pediatric patients are very likely different from pediatric psychiatric patients, it is of note that a larger number of general pediatric ER visits (46%–70%) were also found to be nonurgent,[20,22,23] suggesting that this is a general phenomenon not limited to psychiatric visits.

Significant, independent predictors of inappropriateness included higher GAF score, lack of suicidal ideation/attempt or psychosis as presenting complaint, and lower harm potential or severity of the presenting complaint. Thus, the clinically relevant number of inappropriate PPERS visits seems to be due to an overall decreased severity and harm potential of presentation, including higher clinical assessment of functioning and absence of the more serious and potentially life-threatening presenting complaints of suicidality and psychosis. A multivariate analysis done without the aggregate ratings of severity, harm potential, and acuity found a similar pattern of predictors with notable additions of nonwhite race and lack of referral by psychiatrist. These predictors inversely replicate some of the findings from previous PPERS studies that focused on urgency of the presentation or need for inpatient admission, which included diagnosis of psychotic disorder, violent behavior, and presenting complaint of suicidal ideation/attempt.[13,15,16]

In studies of adult psychiatric ER visits, presentation urgency or inpatient admission were similarly associated with diagnosis of psychotic disorder, presenting symptoms of suicidality, and presence of dangerousness and behavioral dyscontrol.[15,25] Nonurgent, general pediatric ER visits share an association with minority status[19–21] but are distinct in their association with low socioeconomic status[19,24] and Medicaid[21] or non-HMO private insurance.[22] Of note, the

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results from this study suggest no significant difference in insurance status in patients with inappropriate PPERS visits. Although these predictors help describe the inappropriate population for triaging clinicians, the question remains, why are these higher-functioning patients with lower severity and lower harm potential visits referred to the ER, and who decides to send patients to the ER?

In multivariate analyses, school referral dropped out of the final model. However, school was the second-largest referral source (29.7%) and was strongly associated with inappropriate PPERS visits ($P = .0012$) in univariate analyses. That school referral dropped out of the multivariate predictor model is most likely due to the fact that school referrals occurred in patients with characteristics that were also observed in those with inappropriate referrals. In fact, our multivariate sensitivity analysis of determinants of school referral resulted in overlapping predictors of school referral and inappropriate PPERS referrals, such as higher GAF score, lower severity rating, and minority race. This interpretation is further supported by the related finding that referral to the PPERS by school was the main rater-determined reason for suboptimal care ($P = .0056$). Taken together, these findings suggest that schools are more likely to initiate inappropriate PPERS visits of students with relatively low severity of presenting complaints and high clinical assessments of functioning.

This result is consistent with univariate findings that patients with inappropriate visits were more likely to have been previously evaluated by a school counselor, yet the main reason for suboptimal care was direct referral to the ER by the patient's school as opposed to first referring them to an outpatient psychiatrist or therapist for evaluation. These results indicate that the school system is able to identify children and adolescents who need psychiatric help and engage them with a school counselor. However, the school system seems less equipped and successful in adequately assessing the students' level of clinical functioning and severity and harm potential and less able to arrange appropriate outpatient psychiatric care beyond the school mental health system.

Although this is the first time it has been replicated, an association between school referral and nonemergent visits was a key finding in the first study focusing on PPERS.[6] However, predictors of school referral inconsistent with those of inappropriate PPERS visits were presenting complaint of suicidal ideation/attempt and higher acuity rating. Higher acuity is expected, given that patients who have psychiatric problems identified in school are usually referred to the ER the same day and cannot return to school without psychiatric evaluation/clearance.

The finding of relevant proportions of students inappropriately referred to the ER with suicidality has to be interpreted in the context of the concurrent finding of lower severity of presenting complaint and higher GAF score than in patients appropriately referred to the ER. This seeming dissociation suggests that presentations of suicidality at school were usually of low severity made by higher-functioning patients, but that the mere potential of suicidality triggered a chain of events that bypassed acute outpatient evaluation without further triaging. This interpretation is supported by a separate report of this data set, focusing on PPERS for suicidal thoughts or suicidal behaviors or suicide attempts. In these analyses, school referral was significantly and independently associated with the presenting complaint of suicidal ideas, as well as with outpatient disposition of these patients together with higher GAF score and a primary diagnosis of adjustment disorder, together explaining 76% of the variance (E. Callahan Soto, MD; A. M. Frederickson, MD; H. Trivedi, MD; et al, unpublished data, June 2009).

Although the majority of patients seeking PPERS visits had current psychiatric outpatient care (68.7%) and slightly more than half were being treated with psychotropic medications (51.0%), only 21.9% sought and 11.5% completed an outpatient evaluation. Thus, the presence of established outpatient care did not necessarily encourage patients to seek an outpatient evaluation before going to the ER. This finding raises an important question: Are appropriate, accessible, and affordable pediatric psychiatric outpatient care services lacking? Rater-determined reasons for suboptimal care included outpatient appointment not sought by family (52.8%); patient directly referred to ER (40.2%), ie, by school (24.3%); outpatient mental health provider (9.1%) or other agent (6.8%); and outpatient appointment not available in the desired/required timeframe (7.0%). These and other reasons for patients and families to seek PPERS instead of outpatient care should be examined directly in future studies to identify and address barriers for the appropriate use of both preexisting and newly needed psychiatric outpatient services.

On the other hand, on the basis of univariate analyses, patients who were inappropriately referred were less likely to be in current outpatient treatment ($P = .0345$), to be taking psychotropic medications ($P = .0004$), and to have prior inpatient ($P < .0001$) or ER ($P = .0003$) treatment. Nearly all inappropriate visits (97.3%) ended up being referred by the PPERS for outpatient care. Although greater probability for outpatient versus inpatient referral has been consistently replicated in several prior ER studies,[1,6,7,9,13] no previous study has reported treatment characteristics like absent current outpatient care or less psychotropic medication usage to be associated with nonemergent PPERS visits. Several interpretations of this association are possible: (1) inappropriately referred patients lacked adequate outpatient care because they were not previously ill and this was their first presentation; (2) patients with low-severity psychiatric problems did not have an outpatient provider on record, and the ER was utilized as the first portal of entry into psychiatric evaluation; and (3) a relevant subgroup of the inappropriately referred patients did not have a psychiatric

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illness requiring outpatient care or an ER evaluation, representing pseudoemergencies.[14] That inappropriate visits are characterized in multivariate analysis by lower harm potential and severity of presenting complaint seems to indicate the latter. Nevertheless, since it is impossible to differentiate reliably dangerous from nondangerous "emergencies," the burden of assessment and decision cannot be placed on the referring agent. Rather, appropriate, lower-level evaluation services are needed for a timely assessment of questionable presentations that require evaluation.

Limitations

An inherent limitation of any retrospective cohort study is that it requires an examination of a primary data source written by another clinician. This requirement creates problems of interpretation, legibility, and inconsistent documentation. We addressed this issue by doing extensive data cross-checking for error and ambiguity as well as rating data for quality and discarding data that were of extremely poor quality.

Our analysis was also limited by focusing on the total number of visits with less regard to the total number of patients, which included 108 repeats. This focus may have skewed the demographic and other characteristics toward the repeating patients. Since the goal of the study was to identify inappropriate visits better served by lower levels of outpatient care, we felt that each visit, regardless if it was a repeat by the same patient, should be considered a unique PPERS utilization pattern and should be analyzed as such. This method is problematic, however, in that repeat visits may have been influenced by the outcome and disposition of previous visits. A further limitation includes lack of comprehensive information on repeat visits and of follow-up data in general. Follow-up data of patients utilizing PPERS were not collected due to the large patient sample and lack of resources, but such collection should be attempted in future studies.

Clinical Implications

Continuing trends of increasing PPERS usage and the ongoing shortage of outpatient psychiatric resources will most likely contribute to a continued significant number of inappropriate PPERS visits that would be better served by outpatient services. Inappropriate visits were characterized, in univariate analyses, with school referral and lack of current outpatient psychiatric treatment, suggesting a need for more education and outpatient psychiatry services, especially within the school system. The fact that inappropriate visits were closely related to relatively low levels of severity and harm potential of the presentation is consistent with previous studies and supports the idea that future research should include ratings of these variables when considering appropriateness. In addition, these predictors may also serve as a guide for referring agents and for clinicians when triaging PPERS patients.

One proposed method to decrease the burden of inappropriate referrals to the PPERS is to introduce a novel urgent outpatient consultation service into the PPERS service or the community.[26] These urgent outpatient services would maintain a daily scheduling block during business hours for urgent referrals from the PPERS, schools, community agencies, and other mental health providers. They would be intended for patients in need of evaluation in < 48 hours but who do not require ER evaluation or inpatient hospitalization. In a study of 2 Canadian PPERSs, this process has become an effective and reliable way to decrease inappropriate, nonemergent visits by diverting less-emergent patients from the ER to scheduled urgent outpatient consultations.[26] An urgent consultation service of this kind could be implemented in-house as an off-shoot of a pediatric ER, in the community, or in the school system with 4–5 schools sharing 1 urgent consultation service.

Considerable time spent on educating referral sources is also necessary to ensure proper usage of this service. A comprehensive program within each PPERS created to educate referral sources as to appropriate usage of the current ER system may also have a positive impact on increasing appropriately identified youngsters with less overt or "dramatic" psychiatric problems and on decreasing inappropriate visits and reallocating them to lower levels of outpatient care.[26] Education may also serve to address the overall "systems of care" issues regarding lack of coordination and collaboration between schools and other community mental health providers with the PPERS.

One example, derived from our finding that GAF scores > 48 predicted inappropriate PPERS utilization, is that training referring agents in the assessment of relatively simple and standardized GAF scores could improve referral behavior. For changes in referral behavior to occur, it may also be necessary to collaborate with school administrators and other referral source policy makers in order to discuss and initiate changes in existing protocols for psychiatric emergencies or zero-tolerance violence policies that may include ER evaluations as part of the mandatory response, without consideration of further triage or utilization of rapid, non-ER evaluation mechanisms.

It is important to note that since these data were collected, several national and federal initiatives have already begun to expand school-based mental health programs that aim to include more comprehensive and integrated models of care.[27,28] Future research should address potential novel outpatient services in schools, in the community, and within the PPERS service and educational endeavors that may improve on the current PPERS model.

Unfortunately, these proposed interventions in educational and outpatient services are hindered by the current system of ER care. The Emergency Medical Treatment and Labor Act (EMTALA)[29,30] laws created to protect patients from being neglected in emergency situations require that any patient who comes to an emergency

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department requesting examination/treatment for a medical/psychiatric condition must be provided with an appropriate medical/psychiatric evaluation to determine if he or she is suffering from an emergency condition. Thus, referring patients to an urgent outpatient consultation service after a brief triage evaluation in an ER, as in the Canadian example,[26] may not be legal at the present time in the United States.

Further, the mandated Comprehensive Outpatient Provider Services (COPS) referral, which ensures initial assessment services to all patients referred from inpatient or emergency settings within 5 business days of referral, can be obtained only if a patient is referred to the ER for evaluation. Thus, with current excessively long wait times for initial pediatric psychiatric outpatient evaluations, all referral agents including the proposed urgent consultation service would be faced with the problem of how to obtain timely long-term follow-up with an outpatient mental health provider. The EMTALA laws and the COPS referral system do not seem to be a solution for decreasing the trend of increasing inappropriate/nonurgent PPERS visits.[1]

These realities highlight the general need for more child and adolescent psychiatric services, improved mental health education for school administrators, increased linkages between schools and mental health services, and a review of current managed care practices that include limiting health care networks, lack of parity, and lack of adequate payments resulting in a limited number of child psychiatrists joining these networks, which further reduces patient access and the delivery of timely outpatient services. Moving toward these broader goals requires the involvement of policy makers, stakeholders, and clinical experts in a task force aiming to reduce barriers to appropriate outpatient pediatric psychiatric care that ensures the safety and timely treatment of youngsters with psychiatric problems.

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Financial disclosure: **Dr Callahan Soto** has received an honorarium from Berlex Pharmaceuticals. **Dr Correll** has served as a consultant to AstraZeneca, Bristol-Myers Squibb, Cephalon, Eli Lilly, Otsuka, Pfizer, Supernus, and Vanda and on the speakers/advisory boards of AstraZeneca, Bristol-Myers Squibb, Otsuka, Pfizer, and Vanda. **Drs Frederickson**, **Trivedi**, **Le**, **Eugene**, **Shekher**, **Weiskopf**, **Dicker**, and **Fornari** and **Ms Allen-Dicker** report no financial affiliations relevant to the subject of this article.

Funding/support: Supported in part by the Stanley Scholar Psychiatric Research Fellowship, The Stanley Medical Research Institute, Chevy Chase, Maryland (Drs Callahan Soto, Eisenberg, Le, Eugene, Shekher, and Weiskopf).

Acknowledgments: Tara Eisenberg, MD (The Zucker Hillside Hospital, Glen Oaks, NY) contributed substantially to the data entry for this article. Dr Eisenberg has no financial affiliations relevant to the subject of this article.

REFERENCES

1. Sills MR, Bland SD. Summary statistics for pediatric psychiatric visits to US emergency departments, 1993–1999. *Pediatrics.* 2002;110(4):e40.
2. Page D. Pediatric psychiatry: more blues in ED? *Hosp Health Netw.* 2000;74(8):24.
3. Breslow RE, Erickson BJ, Cavanaugh KC. The psychiatric emergency service: where we've been and where we're going. *Psychiatr Q.* 2000;71(2):101–121.
4. United States Department of Health and Human Serivces. *Mental Health: A Report of the Surgeon General.* Bethesda, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration Center for Mental Health, National Institutes of Health; 1999.
5. Nicholson J, Young SD, Simon L, et al. Impact of Medicaid managed care on child and adolescent emergency mental health screening in Massachusetts. *Psychiatr Serv.* 1996;47(12):1344–1350.
6. Mattsson A, Hawkins JW, Seese LR. Child psychiatric emergencies: clinical characteristics and follow-up results. *Arch Gen Psychiatry.* 1967;17(5):584–592.
7. Behar LJ, Shrier DK. Child and adolescent psychiatric emergencies: referral and discharge patterns. *N J Med.* 1995;92(4):236–239.
8. Hillard JR, Slomowitz M, Levi LS. A retrospective study of adolescents' visits to a general hospital psychiatric emergency service. *Am J Psychiatry.* 1987;144(4):432–436.
9. Christodulu KV, Lichenstein R, Weist MD, et al. Psychiatric emergencies in children. *Pediatr Emerg Care.* 2002;18(4):268–270.
10. Garralda ME. Child psychiatric emergencies: a research note. *J Child Psychol Psychiatry.* 1983;24(2):261–267.
11. Healy E, Saha S, Subotsky F, et al. Emergency presentations to an inner-city adolescent psychiatric service. *J Adolesc.* 2002;25(4):397–404.
12. Goldstein AB, Silverman MA, Phillips S, et al. Mental health visits in a pediatric emergency department and their relationship to the school calendar. *Pediatr Emerg Care.* 2005;21(10):653–657.
13. Edelsohn GA, Braitman LE, Rabinovich H, et al. Predictors of urgency in a pediatric psychiatric emergency service. *J Am Acad Child Adolesc Psychiatry.* 2003;42(10):1197–1202.
14. Rosenn DW. Psychiatric emergencies in children and adolescents. In: Bassuk EL, Birk AW, eds. *Emergency Psychiatry: Concepts, Methods, and Practices*. New York, NY: Plenum; 1984:303–349.
15. Hillard JR, Slomowitz M, Deddens J. Determinants of emergency psychiatric admission for adolescents and adults. *Am J Psychiatry.* 1988;145(11):1416–1419.
16. Peterson BS, Zhang H, Santa Lucia R, et al. Risk factors for presenting problems in child psychiatric emergencies. *J Am Acad Child Adolesc Psychiatry.* 1996;35(9):1162–1173.
17. Goldstein AB, Horwitz SM. Child and adolescent psychiatric emergencies: the need for a clear research agenda. *Pediatr Emerg Care.* 2006;22(4):282.
18. Guy W. *ECDEU Assessment Manual for Psychopharmacology*. US Dept Health, Education, and Welfare publication (ADM) 76-338. Rockville, MD: National Institute of Mental Health; 1976: 218–222
19. Brousseau DC, Bergholte J, Gorelick MH. The effect of prior interactions with a primary care provider on nonurgent pediatric emergency department use. *Arch Pediatr Adolesc Med.* 2004;158(1):78–82.
20. Zimmer KP, Walker A, Minkovitz CS. Epidemiology of pediatric emergency department use at an urban medical center. *Pediatr Emerg Care.* 2005;21(2):84–89.
21. Phelps K, Taylor C, Kimmel S, et al. Factors associated with emergency department utilization for nonurgent pediatric problems. *Arch Fam Med.* 2000;9(10):1086–1092.
22. Fong C. The influence of insurance status on nonurgent pediatric visits to the emergency department. *Acad Emerg Med.* 1999;6(7):744–748.
23. Isaacman DJ, Davis HW. Pediatric emergency medicine: state

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of the art. *Pediatrics.* 1993;91(3):587–590.
24. Chin NP, Goepp JG, Malia T, et al. Nonurgent use of a pediatric emergency department: a preliminary qualitative study. *Pediatr Emerg Care.* 2006;22(1):22–27.
25. Claassen CA, Hughes CW, Gilfillan S, et al. Toward a redefinition of psychiatric emergency. *Health Serv Res.* 2000;35(3):735–754.
26. Parker KC, Roberts N, Williams C, et al. Urgent adolescent psychiatric consultation: from the accident and emergency department to inpatient adolescent psychiatry. *J Adolesc.* 2003;26(3):283–293.
27. Paternite CE. School-based mental health programs and services: overview and introduction to the special issue. *J Abnorm Child Psychol.* 2005;33(6):657–663.
28. Taras HL; American Academy of Pediatrics Committee on School Health. School-based mental health services. *Pediatrics.* 2004;113(6):1839–1845.
29. 42 USCA Sec 1395 dd The Emergency Medical Treatment and Active Labor Act (EMTALA)
30. Quinn DK, Geppert CM, Maggiore WA. The Emergency Medical Treatment and Active Labor Act of 1985 and the practice of psychiatry. *Psychiatr Serv.* 2002;53(10):1301–1307.

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