ARTICLE

Effect of Telephone Calls From Primary Care Practices on Follow-up Visits After Pediatric Emergency Department Visits

Evidence From the Pediatric Emergency Department Links to Primary Care (PEDLPC) Randomized Controlled Trial

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Objective: To test whether follow-up phone calls to counsel families about pediatric emergency department (PED) use and primary care availability made after an index PED visit would modify subsequent PED use.

Design: Longitudinal prospective randomized intervention.

Setting: An urban academic children's hospital.

Patients: A total of 4246 individuals aged 0 to 21 years from each of 4 participating primary care practices recording an index PED visit from April through December 2005.

Intervention: Follow-up phone call from the primary care practice within 72 hours of the initial PED visit to counsel about the availability of after-hours advice and when to access the PED.

Main Outcome Measures: All subsequent visits to primary care practices, PED, pediatric subspecialists, or for inpatient hospitalization during a 365-day follow-up period. Logistic and ordinary least squares regressions estimated unadjusted and adjusted odds ratios of follow-up visits, controlling for covariates.

Results: Of the 2166 intervention subjects, 816 (37.7%) recorded follow-up PED visits compared with 819 (39.4%) of the 2080 control subjects ($P = .26$, not significant). The adjusted odds of a follow-up visit being to the PED rather than to another venue was significantly less for intervention than for control subjects (odds ratio, 0.88; confidence interval, 0.82-0.94), indicating decreased intensity of PED use.

Conclusion: Follow-up phone calls from primary care practices after PED visits counseling patients on the use of primary care and emergency services can modulate subsequent care-seeking behavior and decrease future PED use.

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In 2005 more than 24 million patients younger than 15 years visited the emergency department (ED), representing almost 21% of all ED visits or about 40 visits per 100 patients per year. Of these visits, 16% were classified as nonurgent, the highest percent of any age group.[1] A recent benchmark study of pediatric emergency department visits indicated that only 12.6% of pediatric ED visits resulted in admission to either an inpatient or to a 23-hour observation unit.[2]

While controversy exists as to what does and does not constitute appropriate use of the ED,[3-6] it is generally accepted that a more efficient use of resources with greater promise to address a wide range of health care maintenance issues would be for nonurgent ED visits to occur at patients' primary care practices. Researchers have identified many aspects of individual patients,[7-9] their families,[10,11] their insurance coverage,[12-15] and their past experience with primary care[16-20] that appear to be associated with the decision of where patients and families decide to seek care in the event of episodic illness. Although the percentage of children younger than 17 years with ED visits has been declining in recent years,[21] the link between pediatric ED and primary care site use remains a potentially fruitful avenue for quality improvement that is deserving of further study.

Some attempts have been made to design interventions specifically targeted to decrease nonurgent ED use among pediatric patients. Depending on the intensity of the intervention (and its concomitant cost), these attempts have met with various levels of success.[22-24] Whether or not a simple primary care–based intervention such as a follow-up phone contact with brief counseling can in-

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Table 1. Characteristics of Participating Practices

Practice[a]	Total Visits in 2005, No.	Medicaid Use, %	Saturday Sessions	Evening Sessions per Week, No.	House Staff	Distance to PED, Miles
A	1500	88	No	0	Yes	0
B	27 321	86	Yes	2	Yes	0
C	23 431	77	No	4	Yes	3.5
D	16 563	0	Yes	2	No	0

[a] See "Subject Recruitment" subsection of the "Methods" section for detailed descriptions of practice settings A through D.

fluence subsequent health care use at times of episodic illness has not been satisfactorily addressed by these studies. In the first instance, the studies conducted to date have been observational in design and not truly randomized. In addition, the interventions were ED-based and did not involve the patients' primary care practices. Finally, not all studies accounted for the total number of non-ED, non–primary care visits occurring subsequent to the intervention, so, for example, visits to subspecialists were not comprehensively captured.

Pediatric Emergency Department Links to Primary Care (PEDLPC) was designed as a randomized intervention consisting of a counseling phone call to a patient or family placed by the primary care practice subsequent to an index pediatric ED (PED) visit. Our aim was to determine whether, in the context of a busy urban medical center, this simple intervention would modify either the probability or the intensity of future use within a 365-day follow-up period after an initial visit to the PED. We hypothesized that receipt of such a counseling phone call would induce less future PED use for those in the intervention group.

METHODS

SUBJECT RECRUITMENT

Subjects were recruited from among all patients from 1 of 4 pediatric practices younger than 21 years presenting to a busy inner city PED over a 9-month period from April 1, 2005, to December 31, 2005. A comprehensive information technology system at the study hospital captures data for all patients in the system. Knowledge of patients' site of primary care was obtained by linking to the name of their identified primary care provider as well as a review of the cumulative visit history indicating attendance at a specific practice over time. If a patient in the PED identified any of 146 individuals working at these practices (including pediatric house officers and nurse practitioners) as his or her primary care provider or indicated that he or she received his or her primary care at any of the 4 sites, that individual was included in the study. The 4 participating pediatric practices were chosen because their patients preferentially sought emergency care in this PED and because they represented a variety of characteristics thought to influence the decision of when and where to seek care for episodic illness. **Table 1** summarizes the characteristics of the practices. Practice A, located within the hospital, is an adolescent specialty teaching practice without evening or weekend hours serving lower-income adolescents. Practice B is a large academic practice with both evening and weekend appointments available situated adjacent to the hospital and serving a socioeconomically disadvantaged population. Practice C is another academic teaching practice with evening hours available 4 nights per week also serving a population of socioeconomically disadvantaged patients. This practice is located at a busy federally qualified community health center 3.5 miles from the PED. Finally, practice D is a smaller nonteaching practice with weekend and evening availability located across the street from the PED and serving a population of middle-class families.

RANDOMIZATION

All patients from the 4 participating practices presenting for care in the pediatric ED from April 1 through December 31, 2005, were eligible for inclusion in the study. The hospital operates a clinical information system that maintains a replicate database of all clinical data, including all PED encounters, entered into the system in real time. Working with programmers at the data warehouse, all patients from the 4 practices presenting to the PED were randomly assigned to either the intervention or control groups. Each day of the study, the data warehouse programmers randomly assigned the previous days' list of patients to intervention or controlled groups and relayed this information back to the PED. The population of patients therefore included all patients from the 4 practices presenting to the PED during the study period. Once a patient was assigned to be either an intervention or a control patient, that assignment was maintained throughout the study, so if an intervention patient returned to the PED for a subsequent visit, that patient received the intervention treatment for that repeat visit, whereas control patients received routine PED care regardless of how many times they presented to the PED. The protocol was approved by the institutional review board. Informed consent was not deemed to be necessary for study participation.

INTERVENTION

The intervention consisted of telephone contact with the patient, parent, or guardian originating from the primary care site within 72 hours of the PED visit to inquire about the follow-up status of the patient, schedule a primary care follow-up visit if necessary, offer brief counseling regarding the availability of after-hours telephone contact at the primary care site in the event of episodic illness, and provide specific advice regarding the appropriate use of the PED. In preparation for the study, written scripts were pilot tested for clarity of message and ease of deliverability with representatives from each practice's clerical staff (scripts available from the authors on request). After agreement was reached on the scripts' contents, they were distributed to the clerical staffs at each participating practice to encourage uniformity of the message being delivered. Each day, after receiving lists of intervention and control patients from programmers in the data warehouse, personnel in the PED would fax to each of the 4 primary care sites lists of their intervention patients who had been seen in the PED the previous day. Weekend visits were faxed to the primary care sites the following Monday. Clerical staff in each of the primary care sites would then attempt to contact patients or families by telephone. Three attempts were made for each family. Records were maintained at each primary care site regarding

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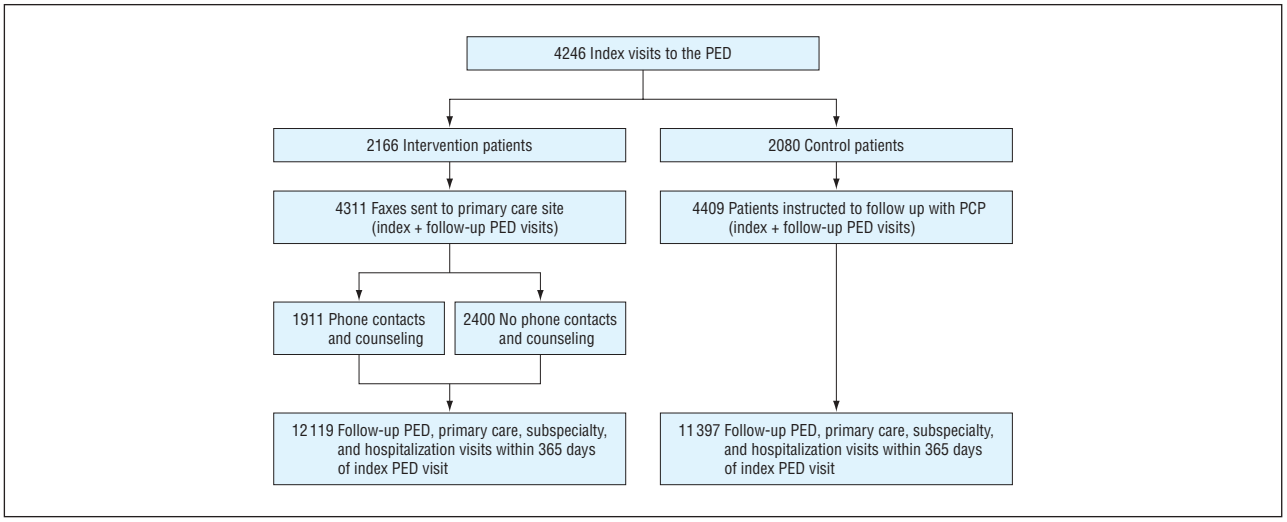

Figure. Intervention algorithm. PCP indicates primary care provider; PED, pediatric emergency department.

the numbers and the percentage of intervention patients reached by phone. As part of routine PED discharge procedure, all patients discharged from the PED were advised to follow up with their primary care providers in the days after their PED visit. This standard characterized the experience of the control patients. The **Figure** summarizes the intervention in graphic form. All patients in the intervention group, regardless of whether or not they were reached by telephone, were analyzed together in an intention-to-treat analysis. Patients' initial randomization status to the treatment or to the control group was maintained for any repeat PED visits during the follow-up period, preserving the integrity of the randomization process. The data warehouse captured all visits by study subjects that occurred at any venue in the medical center. Visits to outlying health care facilities were not captured in this analysis.

OUTCOMES

The information management data warehouse provided encounter information on all patients in the study for a complete 365-day window following the index PED visit including all primary care, subspecialty care, PED, and hospitalization visits within the medical center. Two primary outcomes of interest were measured: (1) the probability that a given individual returned to the PED at any time in the 365-day period following the index PED visit and (2) the probability that a given visit occurring in the 365-day window was to the PED instead of another clinical venue. Measuring the first outcome will reveal whether the intervention discouraged individuals from using the PED at all, while measuring the second outcome will capture the intervention's effect on the intensity of PED use relative to the use of other types of health care visits. Families who tend to use a great deal of health care resources would be expected to have many visits both to the PED as well as to other venues such as to primary care or to subspecialty sites. By measuring the probability of a subsequent visit being a to the PED, we sought to distinguish a tendency to use the PED from a general proclivity to access the health care system.

STATISTICAL ANALYSIS

Logit specifications were used to estimate the unadjusted odds ratio (OR) of any PED follow-up visit for an intervention patient compared with a control patient and to estimate the unadjusted OR of all PED follow-up visits relative to other types of visits for the 2 groups. Multivariate logit regressions controlling for age, race, ethnicity, payer status, sex, distance of the primary care practice from the PED, and availability of weekend and after-hour appointments were used to estimate fully adjusted ORs of any PED visits and of all PED visits between the intervention and control groups. A $P < .05$ was considered significant. No sample size calculations were conducted, as the investigation included the entire population of patients from the 4 participating practices who had visited the PED during the study period.

Table 2. Characteristics of Subjects by Site of Primary Care

Item	No. (%) Intervention (n=2166)	No. (%) Control (n=2080)	*P* Value
Age			<.33
Neonate, <1 mo	30 (1.4)	33 (1.6)	
Infant, 1 mo to <1 y	287 (13.3)	275 (13.2)	
Toddler, 1 to <4 y	565 (26.1)	533 (25.6)	
Child, 4 to <12 y	738 (34.1)	762 (36.6)	
Adolescent, ≥12 y	546 (25.2)	477 (22.9)	
Sex			<.42
Male	1123 (51.9)	1104 (53.1)	
Female	1043 (48.1)	976 (46.9)	
Insurance			<.18
Public insurance	917 (42.3)	930 (44.7)	
Commercial insurance	927 (42.8)	850 (40.9)	
Self-paying	168 (7.8)	175 (8.4)	
Other	154 (7.1)	125 (6.0)	
Race/ethnicity			<.67
White	103 (4.8)	80 (3.9)	
African American	754 (34.8)	727 (35.0)	
Hispanic	1178 (54.4)	1140 (54.8)	
Asian	23 (1.1)	25 (1.2)	
Other	108 (5.0)	108 (5.2)	

RESULTS

Table 2 summarizes the characteristics of the subjects by primary care practice. There were 2166 intervention and 2080 control subjects identified as having index PED visits during the 9-month recruitment period, with some

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Table 3. Intervention Implementation Experience by Practice Site

Item	Practice,[a] No. (%)				Total
	A	B	C	D	
Total index PED visits by intervention patients	66	1292	489	319	2166
Total of follow-up PED visits	91	1315	527	212	2145
Total PED visits (index and follow-up)					
Total calls	109 (69.4)	2125 (81.5)	786 (77.4)	418 (78.7)	3029 (70.3)
Total contacts	55 (35.0)	1200 (46.0)	351 (34.5)	305 (57.4)	1911 (44.3)
Total primary care follow-up appointments	39 (24.8)	437 (16.8)	161 (15.8)	272 (51.2)	909 (21.1)
Mean (SD) follow-up call interval, d	1.9 (1.6)	5.6 (4.9)	2.1 (1.9)	3.1 (4.4)	3.7 (4.1)
Mean (SD) follow-up appointment interval, d	26.7 (13.9)	34.4 (18.1)	8.9 (4.5)	9.6 (9.1)	26.4 (15.3)

Abbreviation: PED, pediatric emergency department.
[a] See "Subject Recruitment" subsection of the "Methods" section for detailed descriptions of practice settings A through D.

Table 4. Intervention vs Control Patients Returning for Follow-up Visit by Type of Visit Within 1 Year of Index ED Visit[a]

Follow-up Visit Type	Patients, No. (%)		*P* Value
	Intervention	Control	
ED	816 (37.7)	819 (39.4)	.26
Primary care	1753 (80.9)	1670 (80.3)	.60
Hospitalization	147 (6.8)	154 (7.4)	.43
Subspecialty	547 (25.3)	485 (23.3)	.14
Total	2166	2080	

Abbreviation: ED, emergency department.
[a] n = 4246.

variation from practice to practice with respect to age, sex, payer status, and ethnicity. Aside from the adolescent practice, the others had similar age distributions, with 1 of them having slightly more younger patients than the other 2. The sex distribution for the adolescent practice was heavily weighted toward female patients, while the other 3 practices exhibited more even distribution of male and female patients. In 3 of the 4 practices, large proportions of patients received publicly financed health care and all practices served very high proportions of African American and Hispanic patients.

The success at achieving the intended intervention is summarized in **Table 3**. The 2166 intervention subjects made a total of 2145 follow-up or repeat PED visits in the year following their index visit. Primary care practices attempted to contact patients approximately 70% of the time owing to limitations in clerical resources. On average, successful contact was achieved in approximately 44% of the visits, with significant variation among the practices. This represents an underestimate of the actual percentage of patients (56.5%) who received the intervention because many patients who returned to the PED during the follow-up period did so on more than one occasion, and on some of those occasions attempts to reach them proved unsuccessful. Although the intent of the intervention was to have successful telephone contact established within 72 hours of the index PED visit, the actual interval varied by practice. The average interval between the PED visit and the phone call from all primary care practices was 3.7 days.

Table 4 summarizes the number and percentage of intervention and control patients with follow-up visits of various types. While fewer intervention than control patients recorded PED visits or the hospital, none of the differences in this table reached statistical significance. Adjusted ORs appear in **Table 5** and again indicate that the effect of the intervention, while in the expected direction, did not reach statistical significance. Several covariate determinants of whether or not a follow-up PED visit occurred did, however, reach statistical significance. The age of the patient mattered because child and adolescent patients had lower odds of returning to the PED relative to infants (the reference category). In addition, compared with commercially insured patients, those with public insurance or who self-paid had higher odds of having a follow-up PED visit. Distance from the PED appeared to decrease the odds of a follow-up visit at a level that didn't quite reach statistical significance, but patients at teaching practices and those with weekend hours had lower odds of follow-up PED visits. Publicly insured patients also had higher odds of visiting subspecialists in follow-up, whereas those attending teaching practices or practices with weekend hours had lower odds of doing so.

Table 6 shows the numbers and percentages of total follow-up visits made by intervention and control subjects categorized by type of visit. Here the unit of analysis is the visit rather than the patient. This Table indicates that of the subjects in the intervention group, 17.7% of all follow-up visits were to the PED while 20.4% of visits made by control subjects fell into this category. By contrast, 22.6% of follow-up visits by intervention subjects were to subspecialty practices, while only 19.5% of follow-up visits made by control subjects were to a subspecialist.

Table 7 presents these findings, adjusted for a series of covariates. The adjusted OR of a follow-up visit by an intervention subject compared with a control subject being to the PED was 0.88. It can be seen that the findings of the intervention are robust to the inclusion of the other explanatory variables. Relative to white subjects, a follow-up visit by an African American or Hispanic subject was more likely to be to the PED than to another venue, as were follow-up visits by self-paying individuals relative to those with commercial insurance.

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Table 5. Adjusted ORs of Intervention vs Control Patients Returning for Follow-up by Type of Visit Within 1 Year of Index Visit[a]

Variable	Follow-up, OR (95% CI)			
	Emergency Department	Primary Care	Hospitalizations	Subspecialty
Treatment	0.94 (0.83-1.06)	1.04 (0.89-1.21)	0.92 (0.72-1.16)	1.13 (0.98-1.31)
Toddler	0.88 (0.72-1.07)	0.52 (0.38-0.71)	0.87 (0.61-1.23)	1.02 (0.79-1.30)
Child	0.70 (0.58-0.85)	0.45 (0.34-0.61)	0.53 (0.37-0.76)	1.23 (0.98-1.56)
Adolescent	0.76 (0.62-0.94)	0.29 (0.21-0.40)	0.88 (0.48-1.61)	1.87 (1.47-2.39)
African American	1.06 (0.79-1.42)	0.71 (0.48-1.05)	1.25 (0.71-2.19)	1.03 (0.72-1.46)
Hispanic	1.16 (0.87-1.54)	0.74 (0.50-1.09)	1.06 (0.61-1.84)	1.35 (0.96-1.90)
Other	0.68 (0.46-1.02)	1.27 (0.73-2.19)	0.91 (0.42-1.97)	1.01 (0.63-1.61)
Public insurance	1.19 (1.04-1.37)	0.77 (0.64-0.91)	1.76 (1.35-2.30)	1.84 (1.57-2.16)
Self-paying	1.38 (1.09-1.75)	0.53 (0.40-0.70)	1.29 (0.81-2.05)	1.03 (0.77-1.39)
Male	1.09 (0.96-1.23)	0.95 (0.81-1.11)	1.07 (0.84-1.35)	1.10 (0.96-1.28)
Nearby practice	1.17 (0.99-1.37)	0.87 (0.71-1.06)	0.74 (0.56-0.98)	1.00 (0.83-1.20)
Teaching practice	0.50 (0.27-0.94)	1.73 (0.86-3.47)	1.45 (0.56-3.79)	0.24 (0.13-0.47)
Evening hours	0.82 (0.55-1.19)	1.15 (0.75-1.74)	0.52 (0.29-0.92)	0.96 (0.64-1.44)
Weekend hours	0.37 (0.19-0.73)	1.98 (0.94-4.20)	1.13 (0.38-3.30)	0.12 (0.06-0.25)

Abbreviations: CI, confidence interval; OR, odds ratio.
[a] n = 4246.

Finally, while the odds of a follow-up visit being to the PED were higher for those whose primary care practices were near the PED, those who received care at teaching practices or practices with weekend hours had lower odds of follow-up visits being to the PED. Relative to infants, older age groups had higher odds of follow-up visits being to subspecialists, whereas those who received care at practices with residents or practices that offered evening or weekend hours had much higher odds of follow-up visits being for primary care.

Table 6. All Intervention vs Control Follow-up Visits by Type of Visit Within 1 Year of Index Visit[a]

Type of Visit	No. (%)		*P* Value
	Intervention	Control	
PED	2145 (17.7)	2329 (20.4)	<.001
Primary care	6905 (57.0)	6546 (57.4)	.68
Hospitalization	325 (2.7)	302 (2.6)	.96
Subspecialty	2744 (22.6)	2220 (19.5)	<.001
Total	12 119	11 397	<.001

Abbreviation: PED, pediatric emergency department.
[a] n = 23 516.

COMMENT

We have shown in a randomized prospective controlled trial conducted in an urban population with high rates of PED use that a simple intervention consisting of a telephone call from a primary care practice delivered soon after a PED visit to offer brief counseling on alternatives to emergency care in the event of episodic illness can modulate future care-seeking behavior. The ability of the participating practices to successfully contact subjects in the trial only part of the time reinforces the robustness of this finding based on an intention-to-treat analysis. By including a series of covariates in our analysis and by randomizing our subjects, we were able to confirm the important associations of some of these patient and family characteristics with PED use, demonstrate that the intervention being tested was effective independent of these other associations, and avoid the pitfalls associated with the selection bias evident in previous investigations of this issue. Finally, by tracking all health care encounters recorded by patients in this large medical care system, we were able to test how telephone counseling after a PED visit affected patients' and families' decisions to substitute PED visits with visits to other providers over time.

Our study was limited by the inability of the participating practices to execute the intervention on a consistent basis and by problems encountered when attempting to contact patients with disconnected phones, working schedules that required messages to be left on home machines, wrong telephone numbers recorded in the hospital's administrative database, and other challenges. While some have experimented with the use of e-mail to circumvent these obstacles, at least 1 published trial found the telephone to have fewer technical problems associated with its use.[25] In addition, we were unable to identify health care service use beyond the medical center where patients received their primary care.

The results of this current study nevertheless conform to findings of previous investigations regarding important determinants of PED use. The decision to take a child to an ED depends on a hierarchy of determinants. These determinants may derive from characteristics of the child and the parent such as the child's age,[7] the family size, the parent's education level,[18] the socioeconomic context in which the family lives,[10] the parents' state of health, or the specific diagnoses involved,[26-28] among others. In our sample, demographic characteristics such as age and race or ethnicity were reliably associated with patterns of PED use, but our findings indicate that the intervention was effective, even when controlling for these covariates.

Once a decision is made to seek medical attention, a second set of criteria assumes critical importance. Whether one is covered by health insurance, what type of insurance one has, and where one usually receives medical care

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Table 7. Adjusted ORs of All Intervention vs Control Follow-up Visits by Type Within 1 Year of Index Visit[a]

Variable	Follow-up, OR (95% CI)			
	Emergency Department	Primary Care	Hospitalization	Subspecialty
Treatment	0.88 (0.82-0.94)	0.94 (0.89-0.99)	1.01 (0.86-1.18)	1.25 (1.17-1.34)
Toddler	1.09 (0.99-1.20)	0.69 (0.64-0.75)	1.51 (1.17-1.94)	1.65 (1.47-1.85)
Child	1.05 (0.95-1.15)	0.55 (0.51-0.60)	1.20 (0.93-1.56)	2.54 (2.28-2.83)
Adolescent	1.01 (0.91-1.13)	0.28 (0.25-0.30)	2.53 (1.96-3.27)	5.35 (4.78-5.98)
African American	1.34 (1.14-1.59)	0.69 (0.61-0.80)	1.71 (1.12-2.62)	1.16 (0.97-1.38)
Hispanic	1.32 (1.12-1.57)	0.66 (0.58-0.76)	1.01 (0.66-1.55)	1.39 (1.17-1.65)
Other	0.77 (0.61-0.97)	1.40 (1.17-1.68)	0.62 (0.32-1.19)	0.77 (0.60-0.98)
Public insurance	0.96 (0.89-1.03)	0.57 (0.54-0.61)	1.44 (1.20-1.73)	2.27 (2.10-2.45)
Self-paying	1.40 (1.23-1.59)	0.77 (0.69-0.87)	1.13 (0.78-1.62)	0.99 (0.83-1.15)
Male	1.04 (0.97-1.11)	0.86 (0.81-0.91)	1.11 (0.94-1.31)	1.20 (1.12-1.28)
Nearby practice	1.18 (1.09-1.28)	0.93 (0.87-1.00)	0.52 (0.43-0.62)	1.06 (0.98-1.15)
Teaching practice	0.43 (0.33-0.56)	12.03 (8.77-16.51)	1.48 (0.88-2.50)	0.20 (0.15-0.26)
Evening hours	0.82 (0.68-1.00)	8.64 (6.17-10.34)	0.55 (0.39-0.79)	1.27 (1.07-1.51)
Weekend hours	0.32 (0.24-0.44)	26.54 (18.99-37.10)	0.81 (0.42-1.56)	0.07 (0.05-0.09)

Abbreviations: CI, confidence interval; OR, odds ratio.
[a] n=23 516.

have all been looked at in cross-sectional analyses as possible determinants of ED use. The results have been mixed; some studies show no influence of insurance coverage[21] and others indicate that uninsured and publicly insured children are significantly more likely to use the ED than those with private insurance.[14,15] Self-paying and publicly insured patients in the current study were more likely to use the PED after an index visit compared with commercially insured patients, even controlling for a variety of other demographic characteristics.

If insurance status is associated with a patient's ability to gain access to primary care, the quality of the interaction that patients experience once in primary care also may influence where they decide to seek care at a time of illness. Those who describe less difficulty obtaining care at their primary care providers without long waits tend to use the ED less.[17] Better continuity of care has also been associated with decreased ED use.[19,20,29]

The findings of our study expand on these previous observations and suggest that certain specific attributes associated with primary care continuity have singular relevance to the decision to access the services of the PED. In particular, the ability of primary care practices to offer evening and weekend hours was strongly associated with less intense PED and more primary care use. Interestingly, the presence of trainees was also strongly associated with less PED use despite the concern that continuity suffers in practices with pediatric residents owing to competing schedule obligations. Finally, patients attending primary care practices located geographically close to the PED tended to use the PED more frequently than those attending more distant practices. The importance of continuity in primary care practice as a determinant of care-seeking behavior validated the decision to have the telephone intervention originate in the primary care practice as a mechanism to reinforce the importance of connecting patients back to their medical homes when attempting to influence future care-seeking behavior.

Previous attempts to design interventions specifically targeted to decrease nonurgent ED use among pediatric patients have met with various levels of success, depending on the intensity of the intervention and its associated costs.[22-24]

If an intervention to modify care-seeking behavior among pediatric patients and their families is to have broad applicability, its cost, particularly if it is to be borne by primary care practices with limited resources, should be as low as practicable while still achieving the desirable outcome. While resource-intensive case management strategies may be effective, we believe that brief follow-up phone calls represent a less expensive strategy with the promise of sustainable results. Calls from the primary care practice serve to reinforce continuity between patients and their medical homes while emphasizing the availability of medical advice from a trusted source when episodic illness occurs. Most pediatric practices already incorporate telephone advice into their current blend of services[30] and others are reaching out to parents over the phone to remind them of upcoming appointments. The telephone can be an effective accessible ally in the effort to guide patients and their families toward the health services that are most appropriate for their needs.

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