ORIGINAL RESEARCH

The Pediatric Emergency Department: A Substitute for Primary Care?

Katherine A. Haltiwanger, MD*
Jesse M. Pines, MD, MBA**
Marcus L. Martin, MD*

**** Department of Emergency Medicine, University of Virginia, Charlottesville, VA***
***** Department of Emergency Medicine, University of Pennsylvania, Philadelphia, PA***

Correspondence and Reprints:
Jesse M. Pines, MD, MBA
Department of Emergency Medicine
University of Pennsylvania
3400 Spruce Street, Ground Radvin
Philadelphia, PA 19104

E-mail: pinesjes@uphs.upenn.edu

ABSTRACT

Objectives: Pediatric emergency department (PED) patients often present with non-urgent complaints. We attempted to estimate the perceived degree of urgency of the visit and to identify reasons for seeking non-urgent care in the PED by patients and parents. Methods: A prospective survey was completed by parents (for children 17 and younger) and patients (18-21) presenting to a suburban academic PED that sees approximately 15,000 patients per year. A convenience sample of participants was enrolled.
Results: Three hundred and five of 334 surveys were completed (91% response rate) over a 3-month period. Twenty-four percent of the chief complaints were perceived by those surveyed as emergent or possibly life-threatening, 23% were felt to be very urgent, and 52% were deemed somewhat urgent or minor. Twenty-five percent of those with minor or somewhat urgent complaints arrived by ambulance. Weekend visits and minority race correlated with a lower degree of perceived urgency. Overall, 79% of those surveyed identified a primary care provider (PCP) for themselves or their child. Of those, 54% had attempted to contact the PCP prior to coming to the PED. Six percent of those who attempted to reach their primary care providers were able to contact them and 52% were told to come to the PED.
Conclusions: More than half of patients and parents presenting to the PED believed they had minor or somewhat urgent complaints. While the majority of patients have a regular provider, limited access to timely primary care and convenience may make the PED a more attractive care option than primary care for many parents and patients.
Key Words: pediatrics, emergency department, non-urgent care

INTRODUCTION

There is considerable data supporting the shift towards use of the emergency department (ED) for non-urgent complaints.[1-7] Despite efforts to improve accessibility of primary care and patient education on appropriate use of the ED, the proportion of non-urgent complaints continues to increase. Previous work has sought to clarify the issues and recommend interventions, but little permanent change has been achieved.[9-13] Patients may overestimate the severity of their illness**,** seeking ED care for generally accepted non-emergent conditions. For some patients the common cold constitutes an emergency. [3,4,14]

We sought to examine the reasons for seeking care in the PED for non-urgent complaints, to estimate the perceived degree of urgency of the visit, and to assess the effort made and difficulty encountered in trying to see or contact a PCP. Our hypothesis was that convenience is a strong incentive towards PED use for non-urgent complaints regardless of availability of primary care and that difficulty in accessing timely primary care is an important factor.

METHODS

A prospective questionnaire was developed to assess patient demographics, degree of urgency, and primary care contact. The questionnaire was designed for completion by parents of children (17 and under) and by patients (18 to 21) presenting to a suburban academic PED that sees approximately 15,000 patients per year. The PED at our institution sees patients up to 21 years old. A convenience sample was enrolled from 8 a.m. to midnight seven days per week. Patients or parents who were unwilling or too sick to participate, e.g. trauma patients, were not enrolled. Those who were pregnant, incarcerated, transferred from another hospital, or had altered mental status were also excluded. This study was deemed exempt from informed consent requirements by the institutional review board. Patient outcomes or

disposition were not reviewed. Data on non-responders was not collected.

RESULTS

Three hundred and five of 334 surveys attempted were completed (91% response rate) over a 3-month period, representing approximately 10% of ED visits over this time period. Twenty-nine families declined participation.

Patient age ranged from 4 weeks to 21 years and the mean age was 9.6 years. Fifty-nine percent of the patients were female. Fifty-four percent were Caucasian, 38% were African-American, and 9% were Hispanic. Forty-eight percent had commercial insurance, 18% had Medicaid, 15% were self-pay, and the insurance of 19% was unknown.

Seventy-nine percent (n=241) of those surveyed identified a PCP for themselves or their child. Of those with PCPs, 54% (n=132) called a physician's office or clinic before coming to the PED. Sixty-eight (52%) of the 132 patients who called were advised to come to the PED. Eight (6%) said they could not get through to their PCP or did not receive a return phone call. Twenty-seven percent of the respondents were unaware of the office hours of any clinic or physician's office. Forty-eight percent of all patients arrived by ambulance.

Parents and patients were asked to rank their complaints as minor, somewhat urgent, very urgent, emergent or possibly life-threatening. Twenty-four percent of the chief complaints were perceived by those surveyed as emergent or possibly life-threatening, 23% were felt to be very urgent, and 52% were deemed somewhat urgent or minor. Twenty-five percent of those with minor or somewhat urgent complaints arrived by ambulance. Weekday visits consisted of 50% very urgent or above on the rating scale. Of the weekend visits, 42% were very urgent or higher.

Convenience was more important to some respondents than others. Of the 305 participants, 113 expressed "no opinion" on the convenience of the PED as compared to their PCP. Of those with an opinion, 64% rated it "more" or "much more" convenient, and 34% rated it "less" or "much less" convenient. Two percent did not respond. Of the 17-21 year age group, 58% found the PED more convenient than the clinic.

Twenty-four percent of respondents would rather have seen their PCP than the PED physician; twenty-two percent preferred an emergency room doctor. Eighteen percent wanted a specialist to see them or their child, and 29% had no opinion. The top five chief complaints were fever (12%), nausea/vomiting/diarrhea (10%), abdominal pain, sore throat, and cough/cold symptoms (6% each). Of the 36 patients with fever as the chief complaint, 19 (53%) would have liked to have seen their PCP. Of those with cough/cold symptoms, 56% preferred a PCP.

DISCUSSION

The Emergency Medicine Treatment and Labor Act (EMTALA) of 1986 mandates continuous access to medical evaluation for patients who seek care. The ED has become a safety net for uninsured patients who cannot obtain care elsewhere.[1,4] Data from the 2001 National Hospital Ambulatory Care Survey found a 20% increase in ED utilization from 1992 to 2001 (89.8 million to 107.5 million). During that same period, there was a 15% decrease in the number of EDs available. Only 51% of the all ED visits in 2001 were triaged as emergent or urgent.[8]

The increase in visits coupled with the decrease in emergency departments has worsened ED crowding. One potential fix for ED crowding is to improve availability and contact with primary care physicians. This study focused primarily on the pediatric emergency department (PED). Our data suggests that even those with available primary care rely heavily on the PED. Contacting the PCP does not necessarily reduce PED visits. Doobinin, et al found a similar rate of PCP contact: 45% of parents called prior to bringing their children in and 73% of those stated they were referred to the PED.[18]

Although we did not differentiate hospital clinic patients from those with private physicians, there is published evidence that private patients are more likely to call their physicians than are hospital clinic patients.[19] The lower rate of calls in hospital clinic patients may be related to the lack of continuity or difficult telephone access in busy clinics staffed by many different caregivers compared to private offices with fewer physicians.

Kini et al. implicated an inadequate gate keeping system as a primary reason for non-urgent PED use during the day when clinics are open. He found that 79% of visits were approved by managed care gatekeepers for reasons including "medically urgent" (although triaged by nurse as non-urgent) and "full office schedule". Approvals tended to increase in frequency later in the day.[12] In a study evaluating the safety of diversion of non-emergent pediatric Medicaid patients to their PCP after initial triage in the PED, Gadomski, et al found a higher rate of subsequent

hospitalization. Also, the group denied a PED visit during the study period continued to utilize the PED as often as the control group in the 6-month follow-up. The authors questioned the cost effectiveness of the gate keeping system based on these data, and concluded that on-site PED denial was not an effective solution.[10]

The effort to link patients with a primary caregiver at birth seems similarly ineffective. Kotagal, et al attempted to show in a retrospective study of newborn infants who were Medicaid recipients that establishing an early relationship with a PCP would decrease use of the PED in the first 3 months of life. Instead, early primary care establishment was associated with a 16-27% increase in PED utilization.[20] A program called "Reverse Referrals" was developed by McCarthy, et al for uninsured ED patients without a PCP. It was found that referral to a community health center did not decrease utilization of the ED for non-urgent complaints, although 22% did have at least one visit to the clinic after referral.[21]

Although EDs are equipped to care for non-urgent medical conditions, they do not have the resources of most clinics or offices. Complete medical records are not always readily available. The use of EDs for non-urgent conditions is seen by some as more costly, often involving more diagnostic testing and contributing to overcrowding.[3,5,7,10,11,15,16] However, Williams, et al found that the marginal costs of emergency care are relatively low.[17] Since most ED resources are already at capacity, the increased workload may have a negative impact in a variety of ways. Patient satisfaction may decrease as wait times increase; ED staff may leave for less stressful working conditions; and physicians in the ED may become frustrated when their ability to provide quality care is compromised.[1]

Use of the PED for non-urgent care poses a unique set of concerns. Continuity of care can be compromised by unnecessary ED visits, especially if patients are not seen in follow-up. Parents may not feel the need to schedule annual visits for children seen frequently in the PED. Pediatric clinic or private office visits are more comprehensive and include preventive care and assessment of developmental and social issues that can be overlooked in a focused, problem-oriented ED visit. The result can be missed or late vaccinations, more frequent illnesses, and delays in diagnosis of serious health problems.

Allegiance to a designated PCP is becoming less convenient and possibly less important to those seeking care in the ED. Almost half of the respondents to a survey by Love, et al would not wait even one day to see their PCP for an acute non-life threatening illness.[22] Although the pediatric population may be more committed to continuity of care, in our survey less than one quarter of respondents stated they would have rather seen their PCP. The majority of those with chief complaints of fever or cough/cold would have preferred seeing their PCP. Emergency medicine physicians were only slightly favored in one diagnostic group: those with nausea, vomiting, or diarrhea.

More than half of respondents rated the visit as somewhat urgent or minor. One-quarter of these arrived by ambulance. It is possible that upon arrival to the PED some of the children appeared less ill than when the ambulance was called. Alternatively, as others have found, ambulance transport may have been the only available mode of transportation.[12] Parents may err on the side of safety when it comes to health issues with their children. Overestimation of the severity of illness or the desire for reassurance drives many reasonable parents to the PED.[4,7]

In the University of Virginia Health System, there is both an established clinic system for pediatric patients and private offices where children are seen in the community. Clinics hold variable office hours with some being open until 10 pm. For the university clinic, there is a physician on call who fields patient and parent calls off hours and determines whether the patient requires referral to the ED. There are limited office hours available on the weekends. In this study, less urgent complaints were seen more often in the PED in the late evening hours and on weekends when many of the clinics and private offices were closed. Higher urgency ratings were seen in those who drove 30 miles or more to be seen, suggesting that these parents may have thought their child was critically ill and needed to be seen at an academic center. Many of our respondents (37%) had "no opinion" on the convenience of the PED as compared to their regular provider. However, many did feel it was more convenient to use the PED. This is consistent with our hypothesis that convenience plays a role in non-urgent PED visits, similar to the conclusions of other investigators.[4,5,7,12,18]

Another potential contributing factor may be the increasingly common non-traditional family structure and lifestyle. Single parents may have work and child care issues that make it difficult to attend regular office hours. Even in two-parent families, both parents may work during business hours and find it hard to make scheduled office visits. Pachter, et al investigated the reasons for late evening PED visits and entertained the idea that these "inappropriate" visits may actually be logical behavior.[23] For example:

A child comes home from school or daycare late in the day and is first evaluated and observed by the parents. An attempt may be made to treat the child at home. Once the parent decides the child needs to be seen, it may be too late to be seen in clinic. Parents may be uncomfortable waiting until the next day. Inability to contact the PCP for advice accounts for many non-urgent visits to the PED as does being referred to the PED when the PCP *is* reached.[5,7,12]

Truman, et al suggested that repeated referral to the PED for non-urgent complaints by the PCP, ED physicians, ED nurses, or triage personnel reinforces inappropriate use of the ED. Expedient care and increased use of diagnostic testing may also reinforce inappropriate use of the PED by creating a false sense of urgency and the impression of better care.[13] Sempere-Selva, et al found that 51% of adult patients surveyed trusted hospital-based care more than primary care and listed it as a reason for coming to the ED. To decrease weekday non-urgent PED use and maintain continuity, walk-in visits should be accommodated by the PCP.[6] If these patients cannot be integrated into a full schedule, a morning or evening block of time for walk-in visits could be helpful. One potential barrier to expanding PCP availability is that reimbursement may be inadequate for PCPs to work longer, inconvenient hours.

Restructuring the PED may hold great potential to better serve these patients. Krakau, et al investigated the effect of adding a general practitioner to the ED staff of a hospital in Sweden that sees a large number of patients with non-urgent complaints. An educational intervention was implemented to encourage patients to register with a primary caregiver. Instead of streamlining care, the 18-month follow-up showed an increase in both the total number of patients seen in the ED as well as the proportion of non-urgent complaints. The wait times for urgent and emergent patients also increased. Creating a tempting alternative to primary care may only worsen the problem. Case management intervention via social workers and nurses has been shown to be modestly successful in assisting Medicaid patients and their families in utilizing primary care services, although the effect did not persist after the study period.[11]

Hansagi, et al suggested that patients seen in the ED three or more times a year for non-urgent complaints be targeted for behavior modification. The suggested program employed a team of health care workers to coordinate care for frequent ED users in an effort to improve outcome for what can be a high-risk population. Theoretically, the patients would learn with repeated interventions how to best utilize the health care services available to them.

Patients with private or commercial insurance have fewer non-urgent PED visits than the Medicare/Medicaid population.[10,16] The expected co-pay and guidelines for PED use may effectively decrease utilization. However, one study found that parents may not always understand the insurance policy requirements for appropriate pediatric emergency care, and therefore increasing co-pays may not have much of an influence.[18] One large pediatric practice used a triage and care system combined with intensive ongoing patient/parent education consisting of counseling at visits, booklets available in the office, bimonthly newsletters, and public lectures. Despite this effort, they were unable to alter the health care utilization habits of their Medicaid patients.[16]

Most would agree there is a trend towards increased use of the PED for non-urgent complaints. Pachter, et al describes the majority of literature on this phenomenon as taking the "provider's perspective."[23] As health care providers we may see PED visits for non-urgent complaints as abuse or misuse of the system without an appreciation for the average patient's perception of the illness for which he seeks our help. What we believe to be a minor condition may represent a serious threat to health in a less educated patient. Providers also may not fully understand the difficulties in obtaining health care.

Some argue that patients with non-urgent complaints should *not* be discouraged from seeking care in the ED.[24,25] This is especially true in the disadvantaged pediatric population where the PED may be the only opportunity to provide medical care. Minor visits can often be dealt with expediently between the emergent cases and can provide financial support for the ED.[25] Many hospitals are adapting to the increased number of non-urgent visits by providing "fast-track" or "express care" coverage for the adult population. For children, easier access to current medical records and improved communication with primary caregivers would enable us to work effectively as a team, ensuring timely follow-up, patient education, and even vaccinations. Ideally, the referring provider would always call the ED when sending a patient in for evaluation and would be available for follow-up. A secure, confidential method of communicating electronically may facilitate better continuity. ED visits could be easily tracked, and telephone follow-up by the PCP the next day would reinforce a working relationship with the patient and family.

There are limitations to this study. The participants were not a true random sample of patients possibly leading to selection bias. The nature of the questions asked may have biased the answers from some participants who felt uncomfortable. Also, both the

PED and clinic are staffed by pediatric residents; seeing the same doctors in both locations, some participants may fail to recognize any distinction between the two sites.

In conclusion, we recommend that parents be advised to call their PCP/telephone advice line for minor health problems unless their child's life is in immediate danger. In our study, this occurred in roughly half the patients surveyed. For those who contacted their PCP initially, it is not clear why they did not follow the disposition advice. If they had followed instructions given by their PCP/telephone advice line, 25% fewer patients would have presented to the ED. Lastly, hours for office visits and telephone advice should be made readily available to all parents and patients.

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