General Pediatric Attending Physicians’ and Residents’ Knowledge of Inpatient Hospital Finances

WHAT’S KNOWN ON THIS SUBJECT: Physicians have little knowledge of health care costs and charges. Studies suggest that education and awareness of hospital finances can decrease unnecessary utilization of resources. Little is known about pediatricians’ awareness of the economics of health care delivery in the inpatient setting.

WHAT THIS STUDY ADDS: Both general pediatric attending physicians and trainees acknowledged a limited understanding of hospital finances, and they demonstrated a lack of awareness of costs, charges, and reimbursements for inpatient care.

abstract

BACKGROUND AND OBJECTIVE: There is evidence suggesting that physicians have a limited foundation of knowledge on health care finances and limited awareness of hospital costs and charges. The objective was to analyze general pediatric attending physicians’ and residents’ knowledge of costs, charges, and reimbursements for care rendered in the inpatient setting.

METHODS: An online survey was administered to all general pediatric attending physicians who work on the inpatient service and the entire pediatric residency program at The Children’s Hospital of Philadelphia (CHOP) in spring of 2011. Participants’ estimates of costs, charges, and reimbursements for several common tests, medications, and services were obtained and analyzed.

RESULTS: A total of 38 attending physicians and 100 residents participated in the study (84% and 76% response rates, respectively). The majority of both attending physicians (71%) and residents (75%) characterized their understanding as “Minimally knowledgeable” or “Completely unaware”. Only 15% of attending physicians’ estimates and 11% of residents’ estimates were within ±25% of true values across all surveyed costs, charges, and reimbursements. Percent error did not vary by level of experience or self-reported knowledge for attending physicians and residents.

CONCLUSIONS: Attending physicians and residents demonstrated limited knowledge of costs, charges, and reimbursements as shown by a low accuracy of estimates and a high percent error; compared with the actual values. To meet expectations for competency in systems-based practice and to be effective stewards of medical resources, it appears that pediatricians need further financial education.

PEDIATRICS 2013;131:1072–1080

AUTHORS: Thomas A. Rock, MD, a Rui Xiao, PhD, b and Evan Fieldston, MD, MBA, MSHP c,d,e

aThe Chartis Group, Chicago, Illinois; Departments of bBiostatistics and Epidemiology, and cPediatrics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; dLeonard Davis Institute of Health Economics at the University of Pennsylvania, Philadelphia, Pennsylvania; and eDivision of General Pediatrics, The Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania

KEY WORDS cost, medical economics, graduate medical education, hospital medicine, policy

ABBREVIATIONS ANOVA—analysis of variance CHOP—Children’s Hospital of Philadelphia CV—coefficient of variation PGY—postgraduate year

Dr. Rock designed the study, designed the survey instrument, coordinated the data collection, carried out the statistical analyses, drafted the initial manuscript, and approved the final manuscript as submitted; Dr. Xiao performed statistical analyses, reviewed and revised the manuscript, and approved the final manuscript as submitted; and Dr. Fieldston conceptualized and designed the study, assisted with statistical analyses, helped draft the initial manuscript, and approved the final manuscript as submitted.


Accepted for publication Feb 13, 2013

Address correspondence to Thomas A. Rock, MD, c/o Evan Fieldston, MD, The Children’s Hospital of Philadelphia, 3335 Market Street, Room #1516, Philadelphia, PA, 19104. E-mail: trock@chartis.com

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2013 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated that they have no financial relationships relevant to this article to disclose.

FUNDING: No external funding.

COMPANION PAPER: A companion to this article can be found on page 1184, and online at www.pediatrics.org/cgi/doi/10.1542/peds.2013-0823.
Despite spending more than any other nation, Americans do not consistently receive high-value health care. Part of the foundation for providing such care, and assessing all aspects of benefits relative to risks, is assessing financial costs in relation to quality. Physicians’ ability to direct the use of health care resources prudently is improved with, and perhaps even predicated on, an accurate understanding of costs, charges, and reimbursements. Recently, the American College of Physicians called for physicians to practice “parsimonious care.” Yet, as a group, doctors receive limited training on health care finances. Previous investigations show that many providers are not knowledgeable about costs, charges, and reimbursements for care. The growing economic challenges confronting the health care system have led to repeated calls for competency in this domain, yet we have not witnessed this translating into improved physicians’ knowledge. Most studies on this topic have focused on medical students or physicians caring for adult patients. Our objective was to analyze general pediatric inpatient attending physicians’ and residents’ knowledge of the actual cost, charges to the patient, and insurance reimbursement for services rendered in the inpatient setting. Our primary outcome was the accuracy of participants’ estimates for these inpatient services according to physician characteristics.

**METHODS**

**Study Setting and Population**

An online survey was administered to inpatient general pediatric attending physicians (n = 45) and all pediatric residents (n = 131) at The Children’s Hospital of Philadelphia (CHOP), a non-profit academic hospital with >480 inpatient beds in Philadelphia, Pennsylvania.

**Study Instrument**

The survey was developed on the basis of medical literature, in particular the instrument used by Graham for internal medicine hospitalists. The current study extends further by including trainees and by asking for estimates of costs and reimbursements in addition to charges. The instrument was pilot-tested for clarity with 6 attending physicians and recently graduated residents. The instrument consisted of 13 questions for residents and 15 questions for attending physicians (Supplemental Appendix 1). Respondents were asked to provide demographic information and to rate their understanding of hospital finances on a 5-point Likert scale. Next, respondents were asked to provide the following estimates, to the nearest dollar: (1) the actual direct cost to the hospital and (2) the charge as billed to the patient for several common tests, medications, and services rendered in the inpatient setting; and (3) the average daily reimbursements for routine and ICU beds. Finally, respondents used a 5-point Likert scale to rate their willingness to learn more about billing charges and health care finances.

**Data Collection**

The survey was administered through SurveyMonkey (SurveyMonkey, LLC, Palo Alto, CA). Responses were tracked to determine which subjects had taken the survey, but participants’ names and other identifiers were not collected. Nonresponders and partial responders received up to 4 reminder emails. The survey remained open for 8 weeks from April to May 2011. The study was approved by the Institutional Review Board at CHOP. There were no financial incentives for respondents.

**Finance Data**

Charges were taken from the hospital’s Charge Description Master Procedure file. For physician services, the weighted averages of coding levels were used to obtain average history and physical and progress note charges. CHOP’s ratios of direct costs to charges (RCC), which are specific to each department (eg, pharmacy, radiology), were used to convert charges to estimated direct costs. This resulted in a cost that includes materials, supplies, and staff directly related to the provision of a service, but not indirect costs, such as overhead or depreciation. Average per diem reimbursement (the predominant reimbursement mechanism at CHOP), which took into account CHOP’s entire payer mix, was calculated by using patient accounts for those admitted and discharged from July 2010 through April 2011. First, we identified inpatient accounts that only had intensive care bed days throughout their entire stay and had an account balance of zero at the time of analysis to isolate charges or costs on patients without including ongoing care. Then we divided this net total by the number of ICU bed days resulting in the average per diem ICU reimbursement. To obtain routine bed average reimbursement, the net ICU revenue and net rehabilitation revenue were subtracted from the total inpatient revenue. The remaining revenue was divided by the total number of routine bed days (Supplemental Appendix 2 shows sample calculations).

These CHOP-specific values for direct cost, charge, and reimbursement were used when calculating the accuracy of respondents’ estimates. Due to the proprietary nature of cost and reimbursement values for a single institution and its payers, these specific amounts are not displayed. However, values from freestanding children’s hospitals were used to provide a comparative range of actual costs and charges. Specifically, these data come from 38 children’s hospitals in the...
Pediatric Health Information System, an administrative database including freestanding children’s hospitals in the United States. The 25th and 75th percentile costs and charges were obtained for each of the 11 activities across 38 hospitals, and were used to construct vertical reference-range bars shown in Figs 1 and 2.

**Statistical Methods**
Response data were summarized by using standard descriptive statistics (mean, SD, range, median, and inter-quartile range) for continuous variables such as cost estimates. Frequencies were used for categorical variables such as postgraduate year (PGY). An accuracy range was defined as ±25% around true values of cost, charge, and reimbursement (based on CHOP data only), as it is a commonly used margin of error. Estimates outside this range were considered inaccurate. We defined a percent error (|estimate – true value|/true value) to quantify the degree of estimation error. Each error represents the percent above or below the true value, and absolute values were used to avoid cancellation between positive and negative percent errors. To report variation of the estimates on a normalized scale, coefficient of variation (CV), defined as SD divided by the mean, was calculated for each service.

The descriptive statistics were compared between attending physicians and residents by using $X^2$ or Fisher’s exact tests for categorical variables, and Wilcoxon rank-sum test for continuous variables. The two-sample $t$ test was used when comparing CV. A nonparametric test of trend was used for the ordered categorical variables.

The average percent error of all estimates (cost, charge, and reimbursement) for each participant across all services is the primary outcome variable. Grouped average percent errors

**FIGURE 1**
Attending physicians’ and residents’ estimates of costs for 11 tests and medications in order of actual cost. The vertical axis is logarithmic for dollar value. For each service on the horizontal axis, there is a vertical dotplot for attending physicians’ (gray) and residents’ (black) estimates. The thin vertical bar to the right of each dotplot pair represents the 25th to 75th percentile of cost across the 38 children’s hospitals used to generate a comparator range, except in 2 cases when CHOP’s estimated costs were less or more than 25th to 75th range, in which case CHOP’s values form the minimum or maximum point of the vertical bar. BCX, blood culture; NSS, normal saline solution; CT abd, computed tomography abdomen & pelvis; RRP, rapid respiratory panel.

**FIGURE 2**
Attending physicians’ and residents’ estimates of charges for 11 tests and medications in order of actual charge. The vertical axis is logarithmic for dollar value. For each service on the horizontal axis, there is a vertical dotplot for attending physicians’ (gray) and residents’ (black) estimates. The thin vertical bar to the right of each dotplot pair represents the 25th to 75th percentile of charges across the 38 children’s hospitals used to generate a comparator range, except in 4 cases when CHOP’s charges were less or more than the 25th to 75th percentile range, in which case CHOP’s values form the minimum or maximum point of the vertical bar. BCX, blood culture; NSS, normal saline solution; CT abd, computed tomography abdomen & pelvis; RRP, rapid respiratory panel.
were compared by using analysis of variance (ANOVA) by years of experience; self-reported knowledge; and for attending physicians, number of weeks on service and percent of work effort that is clinical. Partial responders (n = 5) were included in descriptive statistics but excluded from ANOVA models. ANOVA was conducted for all levels in each category and as a bivariate analysis to compare highest versus lowest levels in each variable. For attending physicians, response categories were grouped as those who practiced <10 years versus more, those who spend <15 weeks per year on the inpatient service versus more, or those whose work effort was <50% clinical versus more. For residents, pairwise groups were made for PGY-1 and PGY-2 versus PGY-3 and PGY-4. For residents and attending physicians, pairwise groups for self-reported knowledge were those with none to minimal versus moderate to high. Statistical analyses were performed using Stata 11.0 (StataCorp, College Station, TX).

RESULTS

Of the 45 attending physicians and 131 residents surveyed, 38 attending physicians (84%) and 100 residents (76%) responded. Five residents did not answer questions about charges and reimbursements, yielding 95 residents (73%) who completed the entire survey. Demographic and baseline characteristics are reported in Tables 1, 2 and 3.

The ranges of both attending physicians’ and residents’ estimates on cost, charges, and reimbursement were large (Table 4): the difference between the minimum and maximum estimates across all care services was, on average, more than 2 orders of magnitude apart (Figs 1 and 2). Despite large ranges for each item, the distribution suggests that the attending physicians and residents tended to rank items in order of actual expense. However, as a group, both attending physicians and residents overestimated costs while they underestimated charges and reimbursements: 66% of attending physicians and 72% of residents overestimated true costs while 82% and 72% underestimated charges, and 95% and 82% underestimated average reimbursements, respectively.

The CV of estimates was 105% (range, 49% to 164%) for attending physicians and 114% (range, 77% to 191%) for residents, with no difference between groups (P = .29). Estimates were not more dispersed for more expensive services, nor for one financial category (ie, cost, charges, or reimbursement) over another.

The average accuracy (the proportion of total estimates within 25% of true values across all care services) was 15% (SD = 8.2%) for attending physicians and 11% (SD = 6.7%) for residents (P = .002). Table 5 provides summative data on average accuracy and median percent error of the estimates. Between the 2 groups, only chest radiograph and complete blood count had statistically significant differences in proportions of physicians with accurate estimates (P < .05). The median percent errors for each care service were also similar between attending physicians and residents, as only 4 out of 28 care services differed significantly (P < .05). Estimation errors ranged from 0% to >5000%, and they were larger and more varied among costs than charges and reimbursements. Median errors for each of the 3 financial categories also revealed large differences among the categories (Fig 3).

In ANOVA models, average percent error among attending physicians was not associated with more experience; there were no significant associations with number of weeks per year as an inpatient attending (F = 0.47, P = .78) or duration in total years as an inpatient physician.
attending ($F = 1.03, P = .39$). For residents, PGY ($F = 1.1, P = .35$) did not show any significant association with average percent error; but self-reported knowledge ($F = 2.4, P = .07$) of finances trended toward it. Pairwise comparisons did not indicate that more experience (years, weeks on service, percent effort, or training level) or more self-reported understanding of finances had lower margins of error ($F$-test $P$ values $>.05$).

**DISCUSSION**

This study analyzes general pediatric inpatient attending physicians’ and residents’ knowledge of hospital finances at one institution. Both groups acknowledged a limited understanding of hospital finances. On average, only 15% of attending physicians’ estimates were within 25% of true values (considered accurate) and their median margin of error was 77%. Only 11% of residents’ estimates were within 25% of true values, with a median margin of error of 82%.

Our research suggests that physicians not only have an incomplete foundation of knowledge on health care finances, but also that knowledge does not improve with experience: attending physicians’ estimates were, on average, accurate only 4% more frequently than those of residents ($P = .002$). Given the
fact that the day-to-day work of physicians does not include financial information, these results are not surprising. Furthermore, experienced attending physicians may not have had training in health care economics during medical school, whereas more recent graduates may have had such exposure. They even may have had graduate school or business administration, a contemporary trend among physicians. While not statistically significant, the association between self-reported knowledge and average percent error for residents neared statistical significance \((P = .07)\), suggesting that a subgroup could help teach peers.

These findings are consistent with previous studies. In 1979, Dresnick et al.\(^\text{16}\) found lack of knowledge regarding frequently ordered hospital billing items, with attending physicians scoring as poorly as medical students.

Recently, hospitalists have been replacing general practitioners to provide inpatient care, and it has been proposed that focused practice could increase financial awareness.\(^\text{11}\) However, when asked about 14 common services, procedures, tests, and physician charges, adult hospitalists surveyed by Graham et al.\(^\text{11}\) had only a 24.8% rate of estimating within a 30% margin of accuracy.

Beginning in medical school, students report inadequate training in medical economics.\(^\text{17,18}\) Yet, many have called for enhancing this education. The Accreditation Council for Graduate Medical Education (ACGME) in its Common Program Requirements \(([IV.A.5.g][3])\) identifies Systems-Based Practice as 1 of the 6 core competencies. Specifically, residents must “incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate.”\(^\text{24}\) The subset on pediatrics specifies that programs must provide education on cost effectiveness, balancing cost and quality, health care organization, and financing.\(^\text{25}\) In 2011, Weinberger\(^\text{19}\) called for cost knowledge to be a seventh competency, noting that “it is the responsibility of the medical profession to become cost-conscious and decrease unnecessary care that does not benefit patients” and that current training goals “place relatively little emphasis on residents’ understanding of the need for stewardship of resources or for practicing in a cost-conscious fashion.”\(^\text{19}\) Presumably, doctors cannot fulfill their duty to understand cost-effective care without training, which the American College of Physicians is trying to address, for example, with its curriculum on cost-conscious care.\(^\text{26}\)

In addition to little training, limited price transparency and the inherent dynamics of a third-party payer system may also explain physicians’ lack of

**FIGURE 3**
Distribution of median percent error for A, costs and B, charges and reimbursements for attending physicians and residents. Central dot is the median; white space between lines extends from 25th to 75th percentile; ends of lines are at 5th percentile and 95th percentile; outliers are shown as stars. The direction of the estimates (above or below the actual amount) is not seen because absolute values are displayed. Note the different scales for A and B.
health care spending increases at un-
becoming increasingly important as
while delivering high-quality care is
physicians with the
rather than price insensitive; providing
that physicians are price ignorant
surgery service. These studies suggest
general medicine service, and general
A physician
zation.
may affect behavior and reduce utili-
ation at 1 urban pediatric medical
Our current system shields physicians
from knowing about costs, how they
how they might practice cost-conscious
care.30 There are recent initiatives
to increase price transparency and
thereby increase cost-consciousness
among physicians. However, the
manner in which price transparency is
implemented will determine its effec-
tiveness.31

Although limited, several studies have demonstrated that providing the charges
for tests at the time of order entry can
decrease utilization, resulting in fi-
nancial savings without compromising
quality,32,33 although sustainability and
generalizability remain to be proven.3–6
These studies were performed at university-affiliated hospitals in sev-
eral different settings: pediatric
emergency department, pediatric ICU,
general medicine service, and general
surgery service. These studies suggest
that physicians are price ignorant
rather than price insensitive; providing
physicians with the finances of di-
agnostic tests at the time of order entry
may affect behavior and reduce utili-
ization.

A physician’s ability to manage costs
while delivering high-quality care is
becoming increasingly important as
health care spending increases at un-
sustainable rates,26 which has fueled
the advent of new payment models
such as accountable care. In these
models, clinicians can share the re-
wards of providing high-value care, but
they may also be held accountable for
total expenditures by the participating
population.34 Furthermore, medical
professionals have an obligation as fi-
duciaries responsible for not only the
patient’s clinical well-being, but also
his/her financial well-being and that of
the society that bears much of the cost.
As Markle7 emphasized in his 1978
JAMA article, “Though good medical
care will never be inexpensive, but it
need not be extravagant and wasteful.
When we learn what costs we are dealing with, we can wisely discrimi-
nate as to how we should invest others’
money in better health.”17

Given the lack of knowledge and the
need for improved awareness of the
finances of health care delivery, train-
ees and practicing physicians should be
educated on costs, charges, and reim-
bursements. In particular, physicians
should understand the difference be-
tween costs, charges, and reimburse-
ments; should realize that costs can be
considered in many ways; should be
aware that charges do not translate
into reimbursements for all activities,
particularly in per diem or case-based
reimbursement; and should have some
knowledge of costs associated with
different activities. It may be useful to
at least educate doctors with a relative
scale, such as that used by travel
guides, by showing scaled $-signs ($, $$$,$$$) to portray ranges of costs and help
clinicians prioritize. Or, they may need
a “shopping cart” to illustrate the
choices in real time.30

In addition, supplying physicians with
individualized utilization data has been
shown to affect ordering behavior.2 As
hospitals continue to engage clinical
staff in value-enhancement or cost-
reduction programs,35–37 providing
physicians with knowledge of health
care finances in conjunction with re-
source utilization and iatrogenic risk
feedback may improve these efforts.19
However, each system or program
designed to curb costs should have
its clinical outcomes properly evalu-
ated in small trials before widespread
use.

The limitations of this study include
that it is a single cross section evalu-
ation at 1 urban pediatric medical
center. However, the findings are
probably not limited to our institution
because this type of analysis has been
conducted in other settings to similar
effect. Second, there was difficulty in
calculating costs, charges, and re-
imbursement of individual services
(Supplemental Appendix 2). Specifi-
cally, there are many ways to consider
costs in health care, including total,
direct, indirect, variable, fixed, mar-
ginal, and allocated or unallocated. We
do not know how respondents con-
sidered costs when asked to estimate
“actual costs.” Some outliers seemed
to confuse cost with charge, while
others believed the hospital charged
similar amounts to the actual cost of
the service, or in some cases, less
than cost. These findings suggest that
some physicians have a lack of
awareness that charges are multiples
of direct cost.

Another potential reason for higher
median errors for cost estimates than
charge estimates is that costs are much
lower than charges, so small absolute-
value differences appear as large per-
cent errors. The ranges of cost and
charge data shown in Figs 1 and 2,
however, suggest that even the “truth”
in terms of costs and charges varies by
institution. Nonetheless, the estimates
from our respondents were substan-
tially more varied than the 25th to 75th
percentile values across these child-
ren’s hospitals. One benefit of showing
this range is that respondents may
have spent time at other institutions,
where they may have learned about
local costs or charges. Even so, most
survey responses were outside of the
cross-hospital range. Finally, average

1078    ROCK et al

Downloaded from http://pediatrics.aappublications.org/ by guest on November 7, 2017
reimbursements for an ICU and routine bed were also difficult to calculate and may have been challenging for respondents to pinpoint because there are many reimbursement models.

In summary, as shown in studies of adult providers, pediatricians had limited knowledge of charges, costs, and reimbursements. To meet educational expectations and to effectively create a value-based health care system, pediatricians appear to need more training in medical economics. Further research is also warranted on the most effective manner to educate pediatricians, and the long-term impact of such education on utilization, costs, and quality of care in inpatient and outpatient settings.

ACKNOWLEDGMENTS
We thank the participating physicians for their time and effort in responding to this survey. We thank members of the CHOP Finance Department, in particular Edward Bleacher, for their help with the financial data. We thank Lisa McLeod, Ron Keren, and Lihai Song for their assistance with cost and charge data from the Pediatric Health Information System.

REFERENCES

6. Markle GB IV. We physicians are fiduciary failures. JAMA. 1978;239(16):1629–1630
21. Pediatric Health Information System Cost Master Index. Available at: https://extranet.chca.com/CHCAForums/PerformanceImprovement/


36. Meyer H. At UPMC, improving care processes to serve patients better and cut costs. Health Aff (Millwood). 2011;30(3):400–403

37. Robinson J. Hospitals respond to Medicare payment shortfalls by both shifting costs and cutting them, based on market concentration. Health Aff (Millwood). 2011;30(7):1265–1271

STRIKING FEAR: I am easily terrified by scary movies. All my family members know this and while they tease me, they monitor television shows and movies and report if they are too scary for me to watch. It is a bit odd that I am so sensitive to visual cues in a movie, but do not suffer panic attacks and can swim for a long time under water. How we process presumed threats, which we turn into fear, seems to involve different parts of the brain. As reported in The New York Times (Health: February 3, 2013), researchers have been studying individuals with damage to the amygdala, an area deep within the medial temporal lobes of the brain long associated with fear. One woman, in particular, with bilateral amygdala damage, has voluntarily participated in numerous studies. She has never demonstrated any fear of scary movies, snakes, spiders or very real domestic assaults, death threats, and robberies at knife or gunpoint. However, after inhaling a gas mixture with 35% CO₂, she experienced a panic attack and reported intense fear. Two other women, also with bilateral amygdala damage that prevented them from developing fear to external stimuli, also panicked and reported fear during the same experiment. The exact reason for this finding is not known but one hypothesis is that different parts of the brain are responsible for responding to external and internal stimuli. The amygdala may be responsible for processing external threats and therefore, individuals with damaged amygdala are not scared by traditionally scary cues such as snakes and robbers. However, other parts of the brain, exactly where is not known, may be responsible for processing internal threats. For example, while humans are not particularly sensitive to carbon dioxide levels in the air, they are quite sensitive to how much is in the body. Rising carbon dioxide levels can cause panic or fear in most individuals. That is presumably why someone under water for a long time may begin to panic. I still do not know how the brain creates a conscious experience of fear, but I do know that for now I will continue to avoid scary movies (and staying under water for too long).

Noted by WVR, MD
General Pediatric Attending Physicians' and Residents' Knowledge of Inpatient Hospital Finances

Thomas A. Rock, Rui Xiao and Evan Fieldston

Pediatrics 2013;131;1072
DOI: 10.1542/peds.2012-1753 originally published online May 27, 2013;

Updated Information & Services
including high resolution figures, can be found at:
http://pediatrics.aappublications.org/content/131/6/1072

Supplementary Material
Supplementary material can be found at:
http://pediatrics.aappublications.org/content/suppl/2013/05/22/peds.2012-1753.DCSupplemental

References
This article cites 29 articles, 6 of which you can access for free at:
http://pediatrics.aappublications.org/content/131/6/1072.full#ref-list-1

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
Administration/Practice Management
http://classic.pediatrics.aappublications.org/cgi/collection/administration/practice_management_sub
Billing & Coding
http://classic.pediatrics.aappublications.org/cgi/collection/billing_coding_sub
Practice-Based Learning & Development
http://classic.pediatrics.aappublications.org/cgi/collection/practice-based_learning_development_sub
Quality Improvement
http://classic.pediatrics.aappublications.org/cgi/collection/quality_improvement_sub
Hospital Medicine
http://classic.pediatrics.aappublications.org/cgi/collection/hospital_medicine_sub

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
https://shop.aap.org/licensing-permissions/

Reprints
Information about ordering reprints can be found online:
http://classic.pediatrics.aappublications.org/content/reprints

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2013 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 
American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
General Pediatric Attending Physicians' and Residents' Knowledge of Inpatient Hospital Finances
Thomas A. Rock, Rui Xiao and Evan Fieldston
Pediatrics 2013;131;1072
DOI: 10.1542/peds.2012-1753 originally published online May 27, 2013;

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/131/6/1072