

Implementation of an Innovative Pediatric Hospital Medicine Education Series

Angela M. Statile, MD, MEd,^{a,b} Nदि Unaka, MD, MEd,^{a,b} Joanna E. Thomson, MD, MPH,^{a,b,c} Heidi Sucharew, PhD,^{b,d} Javier Gonzalez del Rey, MD, MEd,^{b,e} Christine M. White, MD, MAT^{a,b,c}

ABSTRACT

OBJECTIVE: Limitations on resident duty hours require formal education programs to be high-yield and impactful. Hospital medicine (HM) topics provide the foundation for inpatient pediatric knowledge pertinent to pediatric residents and medical students. Our primary objective was to describe the creation of an innovative pediatric HM curriculum designed to increase learners' medical knowledge and their confidence in communicating with patients and families about these topics; our secondary objective was to evaluate the level of innovation of the conference sessions perceived by the learners.

METHODS: A systematic approach was used to develop a curriculum framework incorporating a variety of interactive and engaging educational strategies. Six sessions were studied over the 2012–2013 academic year. The bimonthly sessions were presented during the resident daily conference schedule as a recurring pediatric HM series. Change in learners' medical knowledge and confidence in communicating with families were analyzed pre-session to post-session by using McNemar's test and the Wilcoxon signed rank test, respectively. Learners rated the level of innovation for each session on a 5-point Likert scale.

RESULTS: Content covered during the 6 sessions included bronchiolitis, child abuse, health care systems, meningitis/fever, urinary tract infection, and wheezing. Medical knowledge increased pre-session to post-session ($P < .001$), as did confidence in communicating about each topic with families ($P < .01$). The average rating score for all sessions was highly innovative.

CONCLUSIONS: A systematic approach is useful for developing new curricula for pediatric learners. Focusing on high-yield topics and established competencies allows impactful education sessions within the confines of pediatric learners' schedule constraints.

www.hospitalpediatrics.org

DOI:10.1542/hpeds.2015-0141

Copyright © 2016 by the American Academy of Pediatrics

Address correspondence to Angela M. Statile, MD, MEd, Division of Hospital Medicine, Cincinnati Children's Hospital Medical Center, 3333 Burnet Ave, ML 3024, Cincinnati, OH 45229. E-mail: angela.statile@cchmc.org

HOSPITAL PEDIATRICS (ISSN Numbers: Print, 2154-1663; Online, 2154-1671).

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

FUNDING: No external funding.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

Dr Statile conceptualized and designed the study, created learning materials, performed teaching sessions, and drafted the initial manuscript; Drs Unaka and Thomson participated in the design of the study, created learning materials, performed teaching sessions, and reviewed and revised the manuscript; Dr Sucharew conducted statistical analysis and reviewed and revised the manuscript; Drs Gonzalez del Rey and White participated in the design of the study and reviewed and revised the manuscript; and all authors approved the final manuscript as submitted.

^aDivisions of Hospital Medicine, ^dBiostatistics and Epidemiology, ^eEmergency Medicine, and ^cJames M. Anderson Center for Health Systems Excellence, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; and ^bDepartment of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio

As the health care system in the United States evolves, educators are challenged to maximize learning opportunities with high-impact and practical strategies. The advent of the Accreditation Council for Graduate Medical Education resident duty hour restrictions in July 2011¹ challenged the traditional educational environment for pediatric learners nationwide. With concern for the educational effects of constraints placed on time spent by physician trainees in the hospital,² considerable efforts should be dedicated to adapting resident education endeavors and approaches.³ To maximize teaching time in a way that appeals to today's self-directed^{4,5} and technology-savvy medical learners, it is necessary to transform allotted conference time from the traditional lecture-based model that focuses on basic acquisition of facts and passive learning to interactive sessions that allow for active application of knowledge and skills.

The task of creatively teaching residents and medical students foundational general inpatient pediatric topics is important for hospitalist educators to consider. As the field of pediatric hospital medicine (HM) grows, the key role of pediatric hospitalists in teaching medical learners has been well recognized.^{6–10} In 2010, a group of hospitalists published the Pediatric Hospital Medicine Core Competencies, a comprehensive list of topics pertinent to caring for inpatient pediatrics patients^{11,12} that provides a framework to aid in the design of curricula aimed at teaching these important topics to pediatric learners.

At our hospital, HM faculty provide the majority of the inpatient general pediatric training to pediatric residents and medical students while rotating on our teams on the wards; however, a formal HM education program was not in place. Our primary objective was to systematically develop and implement an innovative HM resident education series to improve learners' medical knowledge and their ability to communicate about inpatient topics with patients and families. Our secondary objective was to evaluate the level of innovation of the new curriculum, as perceived by our learners.

METHODS

Setting and Participants

A curriculum development methods and a paired pre–post survey study design were used to create and evaluate a new HM education series. The study was conducted at Cincinnati Children's Hospital Medical Center, a large academic pediatric tertiary care center. This study was deemed exempt from oversight by the institutional review board.

The center's Division of Hospital Medicine includes >40 faculty members and 6 academic fellows. The residency program has >180 residents, including categorical pediatric residents and those in combined programs. Approximately 20 medical students rotate through the inpatient ward teams each month as part of their pediatric clerkship. Residents and medical students attend a daily 0.5-hour morning report and a 1-hour noon conference on weekdays. Attendance at individual sessions is dependent on rotation schedule; ~50 learners are present at most sessions.

Curriculum Design and Educational Intervention

To create the HM curriculum, a systematic curriculum development method was used,¹³ comprising problem identification, a needs assessment with learners, the creation of goals and objectives, educational strategy creation for each topic, and an implementation plan; this method is summarized in Table 1. Using this strategy, 6 pilot modules were first created that were presented in the 2011–2012 academic year as noon conference sessions, which included the following 6 topics: asthma, communication, evidence-based medicine application, fever of uncertain source, gastroenteritis, and Kawasaki disease. The pilot sessions were designed for feasibility and were not analyzed. Six more modules were then created for study, which were each presented once over the course of the conference schedule in the 2012–2013 academic year. These sessions focused on communicating effectively with patients and families, and they included the following topics: bronchiolitis, child abuse, health care systems, meningitis/fever, urinary tract infection, and wheezing.

The educational sessions were internally developed by the authors using various resources (textbooks, review articles, published literature, and institutional and national guidelines); input from local experts was also included in some sessions. Each session used presentation slides as a framework for discussion and incorporated learning objectives. Educational content included a general review of the topic as background and then relevant evidence-based medicine with recent or landmark publications highlighted. Controversial or challenging aspects of each topic were also presented to spur discussion regarding how to communicate effectively with families. Tools to aid in effective communication, such as the use of a shared decision-making technique,¹⁴ were also included when applicable. The sessions also incorporated a variety of innovative educational methods, including team-based problem-solving, pop quizzes, Web-based audience polling, and expert panelists/discussants (Table 2).

Survey Design and Analysis

A paired pre–post survey study design was used to assess improvements in knowledge and perceptions of the topic of each conference by the resident learners. The anonymous surveys were short in length to incentivize completion (Fig 1). They included 3 main areas of study: (1) a write-in medical knowledge question (eg, “for an infant with fever of unknown source aged 29 to 60 days, please name 2 of the criteria by history for the patient to be considered low risk”); (2) a 5-point Likert-scale question (scale of 1–5, with 1 being “not at all confident” and 5 being “very confident”) regarding perceived confidence of the learners in communicating about a specific topic with patients and families; and (3) a 5-point Likert scale regarding learner perception on the level of innovation of the conference compared with other regularly attended didactic sessions (postsession survey only, scale of 1–5, with 1 being “not at all innovative” and 5 being “very innovative”). The respondents were also asked to specify their level of training. The surveys were completed upon entering each of the 6 conference sessions and then again at the end of the presentation. Surveys were

TABLE 1 Curriculum Design Results

Curriculum Design Step	Outcome
Problem identification	Problem: A formal curriculum to teach residents and medical students fundamental inpatient general pediatrics topics was lacking
Learner needs assessment	Three residents were informally surveyed regarding needs: <ul style="list-style-type: none"> • Surveys should be very short to gain optimal engagement • High-yield topics include HM diseases (eg, bronchiolitis) and highlight controversies and communication skills • Ideal format of sessions: interactive, fun
Creating of goals and objectives	Overall goal: to teach residents and medical students the fundamentals of inpatient general pediatrics through an innovative pediatric HM curriculum series Objectives: created for each topic, designed in accordance with lists of ACGME and HM core competencies ^{11,12}
Educational strategies design	For each topic, an educational strategy (see Table 3) was incorporated into the session to encourage interaction and participation
Implementation plan	Sessions were scheduled during the 1-hour noon conference time frame as 6 bimonthly sessions throughout the 2012–2013 academic year

ACGME, Accreditation Council for Graduate Medical Education.

paired and compared pre-session versus post-session for analysis; data that did not include both a presurvey and postsurvey were not included in the analysis. The medical knowledge questions were categorized as correct versus incorrect, as determined by the primary investigator by using objective evidence presented in the corresponding learning session; any unclear answers were reviewed by additional study team members for categorization. For these dichotomous data obtained in the medical knowledge

question (correct versus incorrect), McNemar's test was used to evaluate a shift in the proportion correct from pre-session to post-session. For the 5-point Likert scale confidence question, the Wilcoxon signed rank test was used to evaluate a change in perceived confidence pre-session to post-session. A *P* value < .05 was used to determine significance. Descriptive statistics, median, and interquartile ranges were used to describe the perceived level of innovation for each conference.

TABLE 2 Session Topics and Educational Strategies

Topic	Educational Strategies
Bronchiolitis	<ul style="list-style-type: none"> • Team-based problem-solving using patient cases • Pop quizzes: brief questions rewarded with token prizes interspersed throughout the presentation
Child abuse	<ul style="list-style-type: none"> • Team-based problem-solving using patient cases • Ask the expert: social worker, child abuse physician
Health care systems (review of a pertinent health care delivery topic [eg, Patient Protection and Affordable Care Act])	<ul style="list-style-type: none"> • Pre–post “quiz” competition with token prizes • Pop quizzes
Meningitis/fever	<ul style="list-style-type: none"> • HM and infectious diseases expert presented with controversial cases and audience questions
Urinary tract infection	<ul style="list-style-type: none"> • Anonymous audience polling
Wheezing	<ul style="list-style-type: none"> • Expert panel discussion and debate of controversial cases

RESULTS

Survey data are summarized in Table 3. Total survey responses received in each session ranged from 24 to 43, but only paired surveys, for which both a pre-session and post-session survey were returned, were analyzed (*n* = 17 to *n* = 38). On average across the year-long conference series, the learners present in the sessions comprised 30% medical students, 30% interns, 25% second-year residents, and 15% third- to fifth-year residents. A statistically significant increase in learner medical knowledge was seen between pre-session and post-session for all 6 individual topics (*P* < .001). For example, the percentage of learners who correctly answered the medical knowledge question about bronchiolitis increased from 22% pre-session to 97% post-session (*P* < .001). Confidence in communicating about the topic with families was also significantly increased for each topic (*P* < .01). For example, pre-session learners rated their confidence in communicating about the use of hypertonic saline in bronchiolitis with families as a 2 on a Likert scale of 1 to 5. This finding improved to a median of 4 post-session, representing a statistically significant improvement (*P* < .001). All sessions were rated as highly innovative, with median scores of 4 or 5 for every session. The number of responses was too low to stratify analysis according to level of training.

DISCUSSION

This study used a systematic curriculum development process to create and implement an innovative HM pediatric learner conference series. Distinct medical knowledge and perceived confidence in communicating with families increased pre-session to post-session for each topic, and sessions were rated as favorably innovative compared with other conferences the learners regularly attend. The use of a systematic approach¹³ to creating our curriculum allowed us to incorporate the needs of our learners into our study design, strengthening its appeal to our targeted audience. By including overall and individual topic goals and objectives in line with the Accreditation

HM Conference Series Post-Session Survey: Fever

For an infant with fever of unknown source aged 29 to 60 days, please name 2 of the criteria by history for the patient to be considered low risk

1. _____
2. _____

How confident are you in your ability to counsel families about the risks of serious bacterial infections in febrile infants?

Not at all confident *Very confident*

1 2 3 4 5

How innovative was this conference compared with other conferences you have attended?

Not at all innovative *Very innovative*

1 2 3 4 5

Please circle your level of training:

Medical student Intern Second-year resident Third-year resident or higher

FIGURE 1 Postsession survey example.

Council for Graduate Medical Education and pediatric HM core competencies,^{11,12} we guaranteed that our sessions also provided aspects of the fundamental inpatient pediatric knowledge required for proficiency. By focusing on medical content, learners were empowered to consider how to best apply this new medical knowledge acquired from the teaching sessions to bedside discussions with families, and this scenario led to an improvement in learner confidence. In addition, we incorporated tips to effectively discuss the topics with

patients and families, which also facilitated discussion regarding communication skills. Interestingly, presession survey results revealed that learners often had gaps in medical knowledge that may not be anticipated by faculty teachers. For example, when asked to define 2 historical criteria that would deem an infant with fever of uncertain source “low risk,”¹⁵ no learners were able to correctly answer the question. Similar low percentages of presession knowledge in other topics further highlight the importance of formal pediatric HM

curricula in teaching future practitioners core pediatric areas.

Our learners also requested that sessions be fun and interactive. To make the sessions innovative, we used a variety of strategies congruent with the values of adult, self-directed learners,^{4,5} who welcome learning experiences that are motivated by their personal interests and can be integrated into their lives. The use of multimodal teaching techniques allowed for engagement of learners of various levels and with different learning preferences. We frequently incorporated real-life patient experience that involved independent or team approaches at problem-solving. In addition, learners were encouraged to ask questions, often of experts in the field, and to participate in anonymous polls that allowed for low-pressure, independent interaction; polls also engage young learners’ technology-savvy approach to learning. Our curriculum was in line with Kirkpatrick’s model of teaching principles of adult learning.¹⁶ Our sessions appeared to incite reaction, the first level of Kirkpatrick’s model, as evidenced by rating them as highly innovative. We also believe we reached the second level of learning during the sessions, as evidenced by our

TABLE 3 Survey Data Results

Variable	Medical Knowledge			Confidence in Application to Practice			Level of Innovation
	% Correct			Median (Likert 1–5)			Median (Likert 1–5), IQR
	Pre (n)	Post (n)	P ^a	Pre	Post	P ^b	
Bronchiolitis	22% (32)	97% (32)	.001	2	4	.001	4 (4–5)
Child abuse	11% (38)	84% (38)	.001	3	4	.001	4 (4–5)
Health care systems	9% (32)	75% (32)	.001	2	3	.001	4 (3.5–4)
Meningitis/fever	0% (17)	82% (17)	.001	3	4	.001	4 (4–5)
Urinary tract infection	7% (30)	73% (30)	.001	3	4	.001	5 (4–5)
Wheezing	9% (32)	72% (32)	.001	2	3	.01	4 (4–5)

IQR, interquartile range.

^a P value comparing preproportion to postproportion correct using McNemar’s test.

^b P value comparing before and after Likert scale scores using the Wilcoxon signed rank test.

presession to postsession survey improvement, although the number of survey questions was small. Although we hope that we contributed to our learners reaching the top levels of the model, behavior change on the job, and later additional results, we were unable to assess our contribution to any sustained knowledge because these learners are exposed to the topics in a variety of modes during training (eg, clinical rotations with direct patient care, reading text, other didactic sessions).

These study results add to the evidence that supports the value and utility of innovative educational techniques in facilitating active learning and affecting the clinical practices of physician trainees.^{17–19} One previous study compared pediatric resident perceptions of the effectiveness of a computer-based tutorial versus facilitated case-based discussions about learning disorders. The study found that facilitated case discussions provided more opportunities to interact with expert faculty, discussions made the topic more relevant to clinical practice, and, most importantly, the learning experience would change their future patient management.¹⁷ Another study evaluated the impact of a series of interactive educational interventions focused on teaching pediatric residents about breastfeeding.¹⁸ The intervention consisted of 4 sessions that incorporated a number of innovative techniques, including discussion groups, role play, and panel discussions with breastfeeding mothers. Similar to our research, this study reported increases in resident knowledge and confidence, which suggests the clinical behaviors of pediatric residents can be enhanced through innovative educational opportunities.

Within the field of pediatric HM, other curricula have demonstrated the effectiveness of innovation to teach topics relevant to inpatient general pediatrics. One such widespread initiative is the national dissemination of the I-PASS (illness severity, patient summary, action items, situation awareness and contingency plans, and synthesis by receiver) handoff curriculum to improve patient handoffs among resident providers.^{20,21} Survey results indicate that

the majority of resident and faculty providers using the novel mnemonic tool believed it facilitated the acquisition of skills pertinent to patient care activities.²⁰ A different group of hospitalists used the pediatric HM competencies^{11,12} to develop a pediatric hospitalist faculty development curriculum.²² The curriculum included innovative strategies in both live and online topic presentations; surveys revealed participants were likely to change practice based on the majority of topics presented. Our curriculum adds to these studies as examples of educational initiatives within pediatric HM that effectively teach important aspects of the field to providers.

Our study had several limitations. First, our needs assessment was limited to only 3 residents, which may not have been representative of interests of the larger group as we prepared for curriculum design; however, sessions were rated as highly innovative, suggesting they met learners' needs. Second, not all session attendees completed both the before and after-session surveys, as survey completion was voluntary. As a result, our findings may suffer from nonresponse or participation bias. In addition, our study sample size prohibited potentially important subgroup analyses of medical knowledge and perceived communication skills (eg, according to level of training). Third, our results show an improvement in correct topic specific questions shortly after the educational session. By including only 2 comparative questions, the assessment may not reflect true gain/retention in knowledge or communication skill.

Furthermore, data presession to postsession only apply to a finite amount of time. Due to the difficulty of ensuring that learners are present at every session within the rotating pediatric resident schedule, assessment of a longer time period for knowledge retention analysis was not possible. Fourth, the findings in this study cannot be correlated to a measurable patient outcome improvement. Finally, this curriculum was created and studied at a single institution and thus may require further testing before implementation at other institutions; however, because it was based on the HM core competencies list^{11,12}

and uses innovative educational strategies that are appealing to learners, it could likely be easily incorporated into the formal teaching conference framework used by many residency programs.

In our own center, we have continued 6 unique sessions per year for an additional 2 years. The sessions continue to be highly regarded and span a variety of HM competency topics.

CONCLUSIONS

A systematic approach to curriculum design was used to develop a pediatric HM conference series that led to increased knowledge and confidence in communicating with patients and families. Innovative teaching methods are valuable in engaging pediatric learners.

REFERENCES

1. Duty Hours. ACGME standards. Available at: www.acgme.org/acgmeweb. Accessed January 28, 2016
2. Desai SV, Feldman L, Brown L, et al. Effect of the 2011 vs 2003 duty hour regulation-compliant models on sleep duration, trainee education, and continuity of patient care among internal medicine house staff: a randomized trial. *JAMA Intern Med.* 2013;173(8):649–655
3. Auger KA, Jerardi KE, Sucharew HJ, Yau C, Unaka N, Simmons JM. Effects of the 2011 duty hour restrictions on resident education and learning from patient admissions. *Hosp Pediatr.* 2014;4(4):222–227
4. Knowles MS, Holton EF, Swanson RA. *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development.* 7th ed. Amsterdam, the Netherlands, and Boston, MA: Elsevier; 2011
5. Merriam SB, Caffarella RS, Baumgartner L. *Learning in Adulthood: A Comprehensive Guide.* 3rd ed. San Francisco, CA: Jossey-Bass; 2007
6. Freed GL, Dunham KM; Research Advisory Committee of the American Board of Pediatrics. Pediatric hospitalists: training, current practice,

- and career goals. *J Hosp Med.* 2009;4(3): 179–186
7. Landrigan CP, Conway PH, Edwards S, Srivastava R. Pediatric hospitalists: a systematic review of the literature. *Pediatrics.* 2006;117(5):1736–1744
 8. Roberts KB, Brown J, Quinonez RA, Percelay JM. Institutions and individuals: what makes a hospitalist “academic”? *Hosp Pediatr.* 2014;4(5):326–327
 9. Heydarian C, Maniscalco J. Pediatric hospitalists in medical education: current roles and future directions. *Curr Probl Pediatr Adolesc Health Care.* 2012; 42(5):120–126
 10. Friedman J. The hospitalist movement in general pediatrics. *Curr Opin Pediatr.* 2010;22(6):785–790
 11. Stucky ER, Maniscalco J, Ottolini MC, et al. The Pediatric Hospital Medicine Core Competencies Supplement: a framework for curriculum development by the Society of Hospital Medicine with acknowledgement to pediatric hospitalists from the American Academy of Pediatrics and the Academic Pediatric Association. *J Hosp Med.* 2010;5(suppl 2):i–xv, 1–114
 12. Stucky ER, Ottolini MC, Maniscalco J. Pediatric hospital medicine core competencies: development and methodology. *J Hosp Med.* 2010;5(6): 339–343
 13. Kern DE, Thomas PA, Hughes MT. *Curriculum Development for Medical Education: A Six-Step Approach.* 2nd ed. Baltimore, MD: Johns Hopkins University Press; 2009
 14. Epstein RM, Alper BS, Quill TE. Communicating evidence for participatory decision making. *JAMA.* 2004;291(19):2359–2366
 15. Team FUS. Cincinnati Children’s Hospital Medical Center: Evidence-based clinical care guideline for fever of uncertain source in infants 60 days of age or less. Available at: www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/default.htm. Accessed August 6, 2015
 16. Kirkpatrick DL, Kirkpatrick JD. *Evaluating Training Programs: The Four Levels.* 3rd ed. San Francisco and Emeryville, CA: Berrett-Koehler; 2006
 17. Bridgemohan CF, Levy S, Veluz AK, Knight JR. Teaching paediatric residents about learning disorders: use of standardised case discussion versus multimedia computer tutorial. *Med Educ.* 2005;39(8): 797–806
 18. Hillenbrand KM, Larsen PG. Effect of an educational intervention about breastfeeding on the knowledge, confidence, and behaviors of pediatric resident physicians. *Pediatrics.* 2002; 110(5). Available at: www.pediatrics.org/cgi/content/full/110/5/e59
 19. Bogetz JF, Gabhart JM, Rassbach CE, et al. Outcomes of a randomized controlled educational intervention to train pediatric residents on caring for children with special health care needs. *Clin Pediatr (Phila).* 2015;54(7):659–666
 20. Starmer AJ, O’Toole JK, Rosenbluth G, et al; I-PASS Study Education Executive Committee. Development, implementation, and dissemination of the I-PASS handoff curriculum: A multisite educational intervention to improve patient handoffs. *Acad Med.* 2014;89(6):876–884
 21. Starmer AJ, Spector ND, Srivastava R, et al; I-PASS Study Group. Changes in medical errors after implementation of a handoff program. *N Engl J Med.* 2014; 371(19):1803–1812
 22. Bucklen KA, Carlson DW, Shah N, Pruitt C. Development of a pediatric hospitalist curriculum to promote faculty development, teaching excellence, and evidence-based care. *Hosp Pediatr.* 2014;4(6):387–392

Implementation of an Innovative Pediatric Hospital Medicine Education Series

Angela M. Statile, Ndidi Unaka, Joanna E. Thomson, Heidi Sucharew, Javier Gonzalez del Rey and Christine M. White

Hospital Pediatrics 2016;6;151

DOI: 10.1542/hpeds.2015-0141 originally published online January 1, 2016;

Updated Information & Services

including high resolution figures, can be found at:
<http://hosppeds.aappublications.org/content/6/3/151>

References

This article cites 15 articles, 4 of which you can access for free at:
<http://hosppeds.aappublications.org/content/6/3/151.full#ref-list-1>

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.hosppeds.aappublications.org/content/reprints>

Implementation of an Innovative Pediatric Hospital Medicine Education Series

Angela M. Statile, Ndidi Unaka, Joanna E. Thomson, Heidi Sucharew, Javier
Gonzalez del Rey and Christine M. White

Hospital Pediatrics 2016;6;151

DOI: 10.1542/hpeds.2015-0141 originally published online January 1, 2016;

The online version of this article, along with updated information and services, is
located on the World Wide Web at:

<http://hosppeds.aappublications.org/content/6/3/151>

Hospital Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 2012. Hospital Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2016 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 2154-1663.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

