Featured Stories:

• Community Acquired Pneumonia:
  A Common Problem with No Common Ground
  One Hospital’s Algorithm

• Improving the Value of Healthcare:
  The Role of the Hospitalist

You are the Hospitalist:

A 14 year old boy with prolonged fever, back ulcer and pulmonary nodules
Our Vision

The Section on Hospital Medicine of the American Academy of Pediatrics is dedicated to the health of all children in the hospital setting through advocacy, education and service—incorporating the core principles of safety, effectiveness, timeliness, efficiency, and equitability in family-centered health care.

Our Mission

Advocacy

The Section is dedicated to being a leader in Pediatric Hospital Medicine — advocating for the health and safety of hospitalized children.

Education

The Section is dedicated to being a leader in educating health care providers, patients and families.

Service

The Section is dedicated to being a leader in identifying the professional needs of Pediatric Hospitalists.

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Greetings to everyone and welcome to summer! I always know its summer when the discussions about enterovirus start to circulate—it’s that time of year. I have a new perspective being at a rehabilitation hospital. The summer tends to be quite a busy time, oddly enough. We get the referrals for children recovering from summer injuries, encephalitis, and elective surgeries. I used to think summer was the slow season!

By now you are aware of the results of our recent elections. The new incoming member to the Executive Committee is Dr Mathew Garber. This means that we are losing a member of our EC—Dr Michael Ruhlen. Mike was one of the founding members of the SOHM back in 1999 when a small group of physicians (of the current EC only Jack Perceley, Mike Ruhlen and I remain) met in San Francisco to form the interest group that eventually morphed into the Section on Hospital Medicine. I know I speak for the entire EC when I say that we will sorely miss Mike’s insight, critical thinking and thoughtful approach to solving problems. His contributions to the Section have been invaluable and have helped SOHM become the strong and vibrant section that it is today.

Like many of you, I attended the July Pediatric Hospital Medicine meeting in Denver. Last year, I had the job of overseeing the entire meeting. This year, I got to relax, listen, and meet more people. The joint sponsorship of the AAP, SIHM and APA has produced a fantastic educational and professional opportunity—every year it just gets better. See you in 2009!

Laura Mirkinson

Since my last message to the Section, Child Life Professionals have been approved as Affiliate Members of the SOHM. Also, after much hard work, our subcommittee on Palliative Care moved on to become a new separate provisional section within the AAP. My kudos to Drs Maggie Hood and Marcia Levetown and others for their success in achieving section status so quickly. Their success is well-deserved and I am certain the section will become an important contributor to the AAP as a whole.

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Laura Mirkinson
Quality, it’s not just for Hospitals

Jennifer Daru, MD, FAAP
jadaru@gmail.com

I talked about “Quality: Special Considerations in Pediatric Hospitals” during the July Pediatric Hospital Medicine Conference in Denver. When you are giving a lecture on something, you always try to think of a catch-what will interest people so they don’t think you are boring and leave? So, I spent a lot of time thinking about what “quality” means. If I told my friend she had a “quality haircut,” she probably wouldn’t appreciate it. In fact if I told her she went to a “quality hospital,” she probably wouldn’t be sure if that was good or not. But as physicians and hospitalists, quality seems to be taking on greater and greater meaning. As of July 1st, we were charged with enhancing and ensuring the quality and safety of our central lines. We are now reporting on quality measures for asthma and ventilator associated pneumonias.

In this edition, and indeed with every edition, of Hospital Pediatrics, we hope to help you ensure the quality of your practice. This issue we have several articles that focus on pneumonia (see “On the Wards” for one group’s algorithm for care; “You are the Hospitalist” for a case with rash and pulmonary infiltrates and “Hospitalists-on-line” for a review of the literature on community acquired pneumonia).

Our other pieces strive to bring something new to your practice (new codes in “Billing and Coding Corner,” new initiatives in our “Quality and Safety” piece). Feel free to write in, provide us feedback or disagree (or agree!) with our authors.

There’s Plenty More to Say!
Jennifer Daru

WANTED: GENERAL EDITOR

After years of dedicated service to Hospital Pediatrics, Dr Sheldon Berkowitz has stepped down as General Editor. At this time the Section is looking for candidates to fill his position on the News Journal Editorial Board.

The General Editor is responsible for outlining objectives and requirements for column editors, actively recruiting writers from a wide variety of professional backgrounds, ensuring that articles meet Hospital Pediatrics standards and guidelines, and brainstorming with other members of the Editorial Board on future News Journal issues and projects.

Applicants must be a member of the Section on Hospital Medicine and have demonstrated writing experience (editorial experience a plus).

For more information on the position please contact:
Jennifer Daru, MD, FAAP
Hospital Pediatrics Editor-in-Chief
jadaru@gmail.com
Starting out, the program opens in August 2008. Legacy will begin with 12 beds when the program opens in August 2008. Starting out, there will be one FTE staffing this unit 24 hours a day. Unlike the staff at Children’s Medical Center Dallas, faculty at Legacy will perform consults, co-management of subspecialty patients and evaluation of pediatric patients in the emergency department.

**Ward Coverage**
The general pediatrics ward is staffed by Hospitalist Service teams and Teaching Service teams. The number of teams on each service varies depending on census and season, but in general at any given time there are 4-5 Hospitalist Teams and 1-3 Teaching Teams. The Teaching Service Team includes a senior pediatric resident, up to three pediatric interns, a sub-intern, up to three medical students, and rotating interns from other specialties (psychiatry, ER, anesthesia, family practice). The Hospitalist Service Team includes family practice residents and sometimes nurse practitioner students. The Teaching Service Teams are capped at 18 patients, and the Hospitalist Service teams are capped at 12. Additional patients above the caps are then distributed to subspecialty-based teams.

Coverage at Children’s Medical Center Legacy will begin with 12 beds when the program opens in August 2008 with plans for expansion. Starting out, there will be one FTE staffing this unit 24 hours a day. Unlike the staff at Children’s Medical Center Dallas, faculty at Legacy will perform consults, co-management of subspecialty patients and evaluation of pediatric patients in the emergency department.

**Staffing**
The Hospitalist Teams are staffed by in-house attendings 24 hours a day with day and night shifts. During the daytime there are usually 4 hospitalists on service, while at night time 2 hospitalists cover. Daytime shifts start at 7 am and end at 5 pm; nighttime shifts are from 5 pm to 7 am. One FTE generally works 14-16 shifts per month. The Teaching Teams have house staff covering at night with attending staff on home pager call. Attendings on the Teaching Teams work 14 days in a row and then work an additional 5 shifts on the Hospitalist Service during the second half of the month. Each hospitalist spends some months on the Teaching Teams and some on the Hospitalist Teams, depending on interest and seniority.

Staffing for the Teaching Teams is also supplemented by non-hospitalist faculty in the Division of General Pediatrics. Moonlighters also help to fill out the Hospitalist Team shift schedule.

**Asthma Short Stay Unit**
The Hospitalist Service also staffs a 12-bed Asthma Short Stay Unit 24 hours per day without house staff. This unit consists predominantly of patients with asthma but occasionally includes other respiratory illnesses such as bronchiolitis. Continuous nebulizations can be administered in this unit.

**Clinical Scholars Program**
Academic activities of the Hospitalist group are strongly supported by the UT Southwestern Department of Pediatrics and the Division of General Pediatrics. Most hospitalists are hired by UT Southwestern at the Assistant Professor level. Significant research support and opportunities for intramural grants are available. The division sponsors weekly research conferences, which includes topics such as journal club, how to write grants, how to create a poster, and how to write a case report. UT Southwestern also operates a clinical research scholar program, which provides the opportunity for faculty to develop the skills to run a clinical research program, while obtaining a Masters degree in Clinical Science.

**Teaching Activities**
In addition to ward attending responsibilities, the Hospitalist Team is very active in medical student and resident education. The hospitalists run a weekly conference discussing all of the cases on the Hospitalist Teams that week. They also participate in facilitating senior morning reports and medical student conferences.

Continued on page 9
Case: 14 Year Old Boy with Prolonged Fever, Back Ulcer and Pulmonary Nodules

Javier Lasa, MD, Pediatric Resident, LASAJ@email.chop.edu
Pamela Mazzeo, MD, Pediatric Resident
Lisa Zaoutis, MD, FAAP, Section Chief, Inpatient Services, zaoutisl@email.chop.edu

The Children's Hospital of Philadelphia, Philadelphia, PA

You are the pediatric hospitalist taking admissions on a late summer day when you accept a 14-year-old male with a 3-week history of nightly fevers and a painless lesion on his right upper back. After obtaining a history from the Emergency Department (ED) staff, the patient, and his family, you learn that he initially presented to his primary medical doctor (PMD) 2 weeks earlier with complaints of nightly fevers and the presence of a right upper back lesion that was noticed the day prior to the onset of fevers. The back lesion was initially a “small spot” on his right upper back that progressed to a small abscess with surrounding erythema. It remained non-tender, but then spontaneously began to drain serous fluid before becoming a small ulcer. Culture of the fluid by his PMD revealed methicillin-sensitive Staphylococcus aureus which was also sensitive to trimethoprim-sulfamethoxazole (TMP-SMZ). After completing a 10-day course of TMP-SMZ with no improvement in the ulcer or nightly fevers, the patient was referred to the ED by his PMD.

The boy reports that his fevers were associated with chills, myalgias and lethargy. Other complaints include intermittent abdominal pain, nausea, decreased appetite, “swollen glands” in his neck, and a 6-kilogram weight loss since the onset of his illness. He denies trauma, joint pain, cough, dyspnea, emesis, diarrhea, recent travel or possible tuberculosis exposures.

His past medical, surgical and family history are noncontributory. The patient lives in a wooded area with no pets although several friends owned dogs, cats and a rabbit (with which he had minimal contact). He has occasionally pulled ticks off of himself over the preceding months but denies any rash with a red ring or target appearance. Aside from the recent course of TMP-SMZ, he takes no medications and denies any allergies. He has no history of travel outside of the United States nor contact with persons at risk for tuberculosis (TB).

His vital signs on arrival include a temperature of 39.8°C (102°F) orally, heart rate 96 beats/min, blood pressure 110/65 mm Hg, respiratory rate 16 breaths/minute, and oxygen saturation 99% while on room air. The young man is awake, alert, comfortable, and well nourished with a nontoxic appearance. He has a 2-cm nontender ulcer with raised erythematous edge and mild crusting on the right upper back (see figures 1 and 2). On palpation of the head and neck region, you discover bilateral scattered nontender, nonerythematous, mobile nodes in the anterior and posterior cervical chains (1-2 cm each), and one similar but larger node in the left supraclavicular area (3.5 cm). Nodes are also palpable in the right axilla (1 cm) and left inguinal region. His lungs, heart, abdominal, genitourinary, and neurologic examinations are normal and there are no joint deformities.

Laboratory work from the ED reveals a normal complete blood count and basic serum chemistry panel as well as normal serum levels of liver enzymes, lactate dehydrogenase and uric acid. You send cultures from blood, urine, and sputum (acid-fast bacilli and bacterial) samples which all return negative. In addition, serologies and/or polymerase chain reaction (PCR) analysis for Epstein-Barr virus (EBV), cytomegalovirus (CMV), human immunodeficiency virus (HIV), Borrelia burgdorferi (Lyme), Bartonella henselae (cat scratch), Histoplasmosis capsulatum, and blastomyces are all negative. A serum angiotensin-converting enzyme (ACE) level is also within normal limits. A chest radiograph is normal; however, a chest CT scan reveals approximately 10 bilateral intrapulmonary nodules varying from 2-12 mm in size as well as bilateral hilar lymphadenopathy showing questionable calcification.

The boy continues to spike fevers twice daily, and on hospital day 4 you choose one of the following tests which proves to be diagnostic.

A. Punch biopsy of right upper back ulcer and excisional biopsy of the supraclavicular node with pathologic analysis and bacteriologic culture
B. Skin testing for tuberculosis via purified protein derivative Mantoux testing
C. Bone marrow aspirate and biopsy
D. Serologic indirect fluorescent antibody testing for human monocytic ehrlichiosis (HME) and for human granulocytic anaplasmosis (HGA)

See page 8 for answer.
Febrile seizures are the most common seizure disorder in childhood, affecting 2% to 5% of children between the ages of 6 and 60 months. Simple febrile seizures are defined as brief (<15-minute) generalized seizures that occur once during a 24-hour period in a febrile child who does not have an intracranial infection, metabolic disturbance, or history of afebrile seizures. This guideline (a revision of the 1999 American Academy of Pediatrics practice parameter [now termed clinical practice guideline] “The Long-term Treatment of the Child With Simple Febrile Seizures”) addresses the risks and benefits of both continuous and intermittent anticonvulsant therapy as well as the use of antipyretics in children with simple febrile seizures. It is designed to assist pediatricians by providing an analytic framework for decisions regarding possible therapeutic interventions in this patient population. It is not intended to replace clinical judgment or to establish a protocol for all patients with this disorder. Rarely will these guidelines be the only approach to this problem.

Steering Committee on Quality Improvement and Management, Subcommittee on Febrile Seizures

Published in Pediatrics in June 2008 http://aappolicy.aappublications.org/cgi/content/full/pediatrics;121/6/1281

Financing Graduate Medical Education to Meet the Needs of Children and the Future Pediatrician Workforce

This policy statement articulates the positions of the American Academy of Pediatrics on graduate medical education and the associated costs and funding mechanisms. It reaffirms the policy of the American Academy of Pediatrics that graduate medical education is a public good and is an essential part of maintaining a high-quality physician workforce. The American Academy of Pediatrics advocates for lifelong learning across the continuum of medical education. This policy statement focuses on the financing of one component of this continuum, namely residency education. The statement calls on federal and state governments to continue their support of residency education and advocates for stable means of funding such as the establishment of an all-payer graduate medical education trust fund. It further proposes a portable authorization system that would allocate graduate medical education funds for direct medical education costs to accredited residency programs on the basis of the selection of the program by qualified student or residents. This system allows the funding to follow the residents to their program. Recognizing the critical workforce needs of many pediatric medical subspecialties, pediatric surgical specialties, and other pediatric specialty disciplines, this statement maintains that subspecialty fellowship training and general pediatrics research fellowship training should receive adequate support from the graduate medical education financing system, including funding from the National Institutes of Health and other federal agencies, as appropriate. Furthermore, residency education that is provided in freestanding children’s hospitals should receive a level of support equivalent to that of other teaching hospitals. The financing of graduate medical education is an important and effective tool to ensure that the future pediatrician workforce can provide optimal health care for infants, children, adolescents, and young adults.

Committee on Pediatric Workforce

Published in Pediatrics in April 2008 http://aappolicy.aappublications.org/cgi/content/full/pediatrics;121/4/855

We are pleased to announce the four recipients of the Section on Hospital Medicine's (SOHM) $500 travel grants to attend the 2008 Pediatric Hospital Medicine (PHM) Conference in Denver, Colorado, July 24-27!

Julia Aquino, MD
Lindsay Jackson, MD
Amanda Lueshen, MD
Wambui Waruungi, MD

Congratulations!

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Contact Nicole Alexander at nalexander@aap.org.
Answer: A

On hospital day 4, this patient undergoes both biopsies. *Francisella tularensis* grows from both biopsy sites and is confirmed by PCR testing, which confirms the diagnosis of tularemia.

Introduction

Tularemia is an uncommon zoonotic infection caused by the highly infectious Gram-negative pleomorphic bacillus *Francisella tularensis*. Worldwide, more than 100 species of animals, birds, amphibians, and arthropods host *F. tularensis*. Many animals and arthropods may carry the organism; however, ticks (especially *Dermatocentor* and *Amblyomma* species) during summer months and rabbits during winter months are the most common vectors implicated in cases of human infection. In addition, domestic cats are increasingly recognized as associated with human tularemia. There are no recorded cases of human-to-human transmission, although laboratory workers are at significant risk of the inhalational form of the disease.

With approximately 120 cases per year in the United States (all states except Hawaii), only 28% of cases occur in children aged 1 to 14 years of age. Cases of tularemia are most commonly reported in Arkansas, Tennessee, Texas, Oklahoma, Kansas, Utah and Missouri.

Clinical Features

Clinical infection occurs via inhalation, intradermal inoculation, or oral ingestion of pathogens in the environment. Several clinical presentations have been described and each form of the disease reflects the mode of transmission: ulceroglandular, glandular, oculoglandular, oropharyngeal, pneumonic, and typhoidal. The clinical presentation of the boy presented above fits the most common ulceroglandular form (accounts for 80% of cases) in which a slow healing ulcer is associated with inflamed regional lymph nodes. The likely mode of inoculation of the boy was through the bite of an infected tick to his right upper back. This case also demonstrates more common unifying symptoms found with tularemia with the presence of fever, chills, myalgias, fatigue and skin lesions. Rare manifestations include osteomyelitis, pericarditis, peritonitis, endocarditis, and nervous system abnormalities, including meningitis, abscesses and optic neuritis.

Diagnostic Studies

Due to its relative infrequency and non-specific presenting symptoms, there is often considerable delay in diagnosis and in initiation of effective therapy. Routine blood culture results are usually negative for tularemia. Successful cultivation requires medium that contains cysteine for growth such as the tissue cultures used in this case. Cultivation in the laboratory poses a hazard for workers; thus, laboratory personnel should be advised prior to receipt of tissue samples about potential tularemia cases to ensure safe handling techniques. Additional means of diagnosis include PCR, direct fluorescent antibody or seroconversion (at 2-7 weeks after exposure).

Differential Diagnosis

The salient characteristics of this boy’s presentation included his systemic symptoms (fever, weight loss, fatigue, myalgias, nausea), his back ulcer, and his lymphadenopathy (with an apparent predominance in the region of the ulcer). The differential diagnosis would include oncologic, infectious, and inflammatory infectious etiologies. Based on the testing done previously, some of the more common causes of fever and lymphadenopathy could be excluded: EBV and CMV mononucleosis, HIV, cat scratch disease, Lyme disease, and histoplasmosis and blastomyces were ruled out on the basis of negative titers and PCRs. Sarcoisosis is unlikely in the context of a normal ACE level, and though systemic lupus erythematosus (SLE) could have accounted for some of this patient’s symptoms, his ulcer was not consistent with typical SLE cutaneous lesions, and he did not meet other criteria for the disease.

Oncologic processes would be important diagnostic considerations. Leukemia and lymphoma are the childhood cancers of particular concern based on the patient’s lymphadenopathy and systemic symptoms, and though bone marrow aspirate and biopsy might have helped establish a diagnosis, a negative biopsy would not necessarily exclude lymphoma. On the other hand, the excisional tissue biopsy of the entire enlarged supraclavicular lymph node would likely provide important histological information.

The presence of the ulcer on this patient’s back made an infectious process a strong possibility, and after your initial laboratory evaluations, several possible pathogens remained on the differential. This patient had no history of tuberculosis (TB) exposure and no cough, but given his chest CT findings of bilateral hilar lymphadenopathy and the possibility of tuberculous lymphadenitis (scrofula) or cutaneous TB, placing a PPD would have been a most reasonable test in his work-up. Ehrlichial disease (HGA and HME) can cause systemic symptoms, rash, and lymphadenopathy, and it can be transmitted by ticks; however, its characteristic rash is usually macular, maculopapular, or petechial. Herpes simplex virus (HSV) or varicella zoster virus (VZV) would be unlikely to present with a single cutaneous lesion, and though cutaneous leishmaniasis can present with fever, adenopathy, and a single ulcer, this patient has no history of travel to an endemic area. Ulceroglandular tularemia, however, could account for his systemic symptoms, his regional lymphadenopathy, and his skin lesion.
With these considerations for the differential diagnosis, the combination of punch biopsy of the back ulcer and excisional biopsy of the left supraclavicular lymph node would be the best choice for establishing the diagnosis by providing both histologic and bacteriologic information.

**Treatment**
Medical management of tularemia often includes using targeted antimicrobials with symptomatic and supportive care for accompanying conditions. *F. tularensis* is naturally resistant to penicillins and first-generation cephalosporins. Intravenous gentamicin is the most effective treatment in pediatric populations, though fluoroquinolones may offer similar efficacy with fewer toxicities.

**Outcome**
This patient defervesced promptly on intravenous gentamicin (see figure 3) and was discharged with a percutaneously inserted central catheter (PICC) to complete a 14-day course of treatment. With no direct exposure to an infected mammal, the most likely route of infection for this patient in a tick-endemic area would be from an unrecognized tick bite to his upper back.

**REFERENCES:**

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**Hospitalist Service, Children’s Medical Center Dallas and Children’s Medical Center Legacy at Plano, Dallas, TX, continued from page 5**

**Family Centered Rounds**
Family Centered Rounds has been conducted every day on one of the hospitalist-lead Teaching Teams since July 2007. Participating in these bedside rounds are the attending hospitalist, residents and medical students, bedside nurse, pharmacist, nutritionist, and discharge planner. The Family Centered Rounds faculty is actively involved in setting up a website with resource on Family Centered Rounds, and conducting evaluation research studies of the program.

**Other Activities**
Hospitalists at Children’s Medical Center Dallas are involved in many hospital administrative committees. They take the lead in the Inpatient Throughput committee and the Family Centered Rounds steering committee. In addition, several hospitalists have been instrumental in the implementation of the electronic medical record system. Other groups the hospitalists are involved in include the Infection Control Committee, Medical Advisory Committee, and Patient Safety Committee. Within the Division of General Pediatrics, there are subcommittees as well. The Billing Committee includes two medical billers and three hospitalists, and creates individual reports on billing activities for each faculty members. The Quality Improvement Committee evaluates readmissions, ICU admissions/transfers, and conducts Morbidity and Mortality Review for the group. The Division offers an incentive plan in addition to the basic salary, based on certain measures. A few members of the hospitalist group also have outpatient responsibilities, including one member that participates in the Adolescent Medicine clinic and one with infectious disease background who works in the HIV clinic.

For more information, contact Dr Vineeta Mittal, Vineeta.Mittal@childrens.com

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**2008 Course on Neonatal and Pediatric Critical Care Transport Medicine**

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- Special mini-S.T.A.B.L.E. session
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Watch the Section on Transport Medicine website at: www.aap.org/sections/transmed for more information.

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**Interested in submitting a case for You Are The Hospitalist? Contact Lisa Zaoutis, MD, FAAP at zaoutisl@email.chop.edu**

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**WRITERS WANTED!!**

What’s going on in your hospital or in your city? A conference or workshop? An intriguing case? A new perspective, procedure or protocol?

Come on, share!
If you have an idea for an article that might interest your colleagues across the continent, let us know because we’re looking for new contributors to *Hospital Pediatrics*!

Contact Jennifer Daru, Editor-in-Chief, at jadaru@gmail.com.
Community Acquired Pneumonia: A common problem with no common ground

Ricardo Quinonez, MD, FAAP, Faculty Inpatient Service, quinonez@bcm.edu
Baylor College of Medicine, Texas Children’s Hospital, Houston, TX

Pneumonia is the most common infectious cause of hospitalization in children under five. The World Health Organization (WHO) estimates that there are 150.7 million pediatric cases per year, resulting in nearly 20 million hospitalizations. The costs to patients, families, and the healthcare system are staggering if you take into account “sick” days, missed work, and the cost of both inpatient and outpatient treatment. However, despite being such a common diagnosis, the evaluation and management of community acquired pneumonia (CAP) remains variable and based on local or personal practice rather than available evidence. Furthermore, the available evidence does not answer all of the relevant questions. This article will review the literature with regards to 3 main components of the evaluation and treatment of CAP: chest radiograph (CXR), blood culture, and antibiotic management, particularly in the inpatient setting.

CXR is considered by many to be the best diagnostic tool available for CAP. However, the utility of the CXR in the evaluation of CAP has not been consistently demonstrated in the available literature. A study published in Lancet in 1998 measured the effect of a CXR on clinical outcomes of 522 children who met the WHO case definition for pneumonia. The children were randomized into two groups—one group had CXRs as part of the evaluation, and the other group did not. Management decisions were made based on clinical data alone for those patients in whom a radiograph was not obtained, and based on all available data including CXR for those in whom it was obtained.

The primary clinical outcome was time to recovery, defined as resolution of symptoms and determined by structured phone interviews with caregivers. Secondary outcomes included final diagnosis, antibiotic and other management, and subsequent use of health facilities (“bounce-backs”). Time to recovery was similar in both groups and subsequent use of health facilities was the same. The children in whom radiographs were obtained were prescribed antibiotics more often while the ones in the non-radiograph group were given the final diagnosis of viral pneumonia or bronchiolitis more often.

Other studies have looked at the utility of CXR for identifying the etiology of pneumonia. Virkki et al. evaluated laboratory and radiographic findings in 254 patients with CAP. An infectious etiology was found in 85% of patients. While they found that 71% of children with alveolar infiltrates had bacterial etiologies, half of the patients with interstitial infiltrates also had bacterial infections. Esposito el al. looked at whether clinical, laboratory, or CXR findings could differentiate pneumonia caused by “typical pathogens” such as Streptococcus pneumonia or “atypical pathogens” such as Mycoplasma pneumonia. Although their study showed a major contribution of atypical pathogens in children with CAP, they failed to find any significant radiographic differences between typical and atypical pneumonia. These studies indicate that radiographic findings in CAP do not reliably delineate the etiology of the infection, potentially minimizing the impact of CXR results on management decisions.

There is also little evidence to support the practice of obtaining a blood culture in patients with CAP. The Community Acquired Pneumonia Guideline Team at Cincinnati Children’s Hospital Medical Center does not recommend obtaining blood cultures on a routine basis for CAP in the associated evidence-based care guideline. This recommendation is based on the fact that, even before universal pneumococcal vaccination, the yield for blood cultures in the evaluation of CAP in an outpatient setting was around 2%. Recent data in adults has shown that the rate of false positive blood cultures in CAP is similar to or exceeds that of true positives. More importantly, the true positives infrequently led to changes in therapy, and when therapy was changed, the decision was rarely based on detection of resistant organisms. Even if you were to take only pneumococcal pneumonias as your starting point, the rate of positive blood cultures is around 5%. If you think these odds are favorable, consider that only about 40% of kids hospitalized with CAP have been shown to have S. pneumoniae as the cause of their disease. Suddenly that 5% drops again to approximately 2% for all children hospitalized with CAP.

The treatment of CAP in the inpatient setting remains variable and often lacking in evidence. Furthermore, as opposed to other common pediatric entities such as urinary tract infection and otitis media, there are no AAP practice guidelines for management of CAP. The Cincinnati CAP Guideline Team recommends high-dose amoxicillin for children under 5 and a macrolide for those over 5 years of age for outpatient treatment of CAP, but they do not make recommendations for inpatient management. Many institutions use 2nd or 3rd generation cephalosporins, instead of ampicillin, as first-line therapy for children hospitalized with CAP. The use of cephalosporins for the inpatient management of pneumonia is likely driven by concerns about the increasing resistance of pneumococcus to penicillin. Nationally, 15-35% of S. pneumoniae causing CAP are resistant to penicillin in all age groups. However, the clinical relevance of this resistance has not been shown. As a matter of fact, the available evidence argues against any clinical significance of streptococcal resistance to penicillin and may actually show a relative advantage to using penicillin.

In adults, a prospective multi-national study showed that the use of penicillin...
standardize diagnostic and treatment modalities in a cost-effective manner. However, as is often pointed out, clinical guidelines are just that—guidelines. Evidence-based medicine by its very nature ignores the “human” side of medicine. A chest radiograph may not always affect outcomes in pneumonia, but its utility may be one beyond the scope of clinical outcomes. Discussions with parents and caregivers are always more effective when accompanied by visual aids. And until better tests are available, a chest radiograph will still remain the main diagnostic tool in our armamentarium for the evaluation of CAP, no matter whether the evidence supports its use or not. Treatment however is not bound by such concerns. Adherence to the evidence when it comes to treatment of CAP can reduce costs and reserve wider spectrum antibiotics for conditions in which they are truly indicated.

REFERENCES


Did a topic or conversation on the SOHM Listserv spark your interest? If so, please contact Jennifer Maniscalco, MD, MPH, FAA at jmaniscalco@gmail.com to learn how to contribute to this column.
Clinical Guideline for Community Acquired Pneumonia

Kishore Vellody, MD, FAAP. Assistant Professor of Pediatrics
Children’s Hospital of Pittsburgh, Pittsburgh, PA

Editors Note:
Clinical guidelines are increasingly recognised as a means to ensure quality of care, to standardize care at an institution, to educate young clinicians and to streamline the movement into computerized order entry on the inpatient wards. Common diagnoses do not always lend themselves to a straightforward clinical guideline. Dr. Vellody and his team at Children’s Hospital of Pittsburgh have developed a Clinical Guideline for community acquired pneumonia, a diagnosis for which multiple management strategies exist. The abbreviated guideline presented in this article is for your review. Complete versions are available upon request.

Purpose
Based on the most current and best scientific information, the following guidelines are intended to help practitioners at all levels of experience refine their knowledge and select among the options for evaluation and management of community acquired pneumonia.

Inclusions
These guidelines are intended primarily for use in children 60 days through 17 years of age with signs, symptoms, or other findings suggesting a diagnosis of uncomplicated pneumonia acquired by exposure to organisms in the community.

Exclusions
The guidelines do not address considerations needed to manage all children. See algorithm for exclusions.

Etiology
The etiology of community-acquired pneumonia has proven difficult to clearly describe. Direct culture of infected lung tissue requires invasive techniques, and blood cultures are positive in only 10% or less of children with bacterial disease. In spite of these problems some consistent trends and conclusions can be derived from the literature and these are summarized below.

<table>
<thead>
<tr>
<th>TABLE 1: RESPIRATORY RATES</th>
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<tbody>
<tr>
<td>Age</td>
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<tr>
<td>2-12 months</td>
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<td>1-5 years</td>
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• **Streptococcus pneumoniae** is the most commonly identified bacterial cause of pneumonia in all age groups. The rates of pneumococcal pneumonia are declining with introduction of the PCV7 vaccine.

• **Viruses** are identified most often in children < 5 years of age. Respiratory syncytial virus (RSV) and human metapneumovirus are the most common viral etiologies in those < 3 years of age.

• **Mycoplasma pneumoniae** and **Chlamydia pneumoniae** are more common in school-age children. These organisms may be becoming increasingly prevalent in preschool children.

• It is recommended that practitioners use the World Health Organization (WHO) age specific criteria for tachypnea. (Table 1).

• Respiratory rates are best determined over a full 60-second period or by adding together two separate 30 second counts. Tachypnea may not be present in a child with pronounced retractions or other signs of increased work of breathing (WHO 1999[E]).

• A small proportion of patients under five years of age may present without classical findings of pneumonia. Pneumonia also may present as abdominal or chest pain, vomiting, or headache.

• A normal pulse oximetry reading does not rule out pneumonia.

Clinical Assessments

• Pneumonia is suggested by the child’s signs and symptoms. Important historical data include the age of the child, season of the year, travel history, sick contacts, and immunization status – particularly Hib, PCV7 (Prevnar), and influenza vaccinations. On physical exams, signs of respiratory distress including tachypnea, retractions, nasal flaring, grunting, cough, crackles, wheeze, and decreased breath sounds are possible predictors of pneumonia in children. The predictive value of these signs is strongest when the child is febrile, cyanotic, or when more than one of these signs of breathing dysfunction is present. The absence of fever is reported to have a negative predictive value of up to 97% for children under 17 years of age when temperature has not been modified by antipyretics.

Radiologic Assessments

• The routine use of radiographs in the diagnosis of pneumonia as well as to distinguish bacterial disease from viral disease is not supported by evidence.

• It is recommended that chest radiographs be considered in children less than 5 years of age with high fevers and high white blood cell (WBC) counts of uncertain source with a negative urinalysis

• when clinical findings are ambiguous

• when a complication such as a pleural effusion is suspected

• when pneumonia is prolonged and unresponsive to antimicrobials

• children who are admitted for pneumonia

...
children with a prior history of pneumonia\textsuperscript{1,3,8,43,46}

**Laboratory Assessments**

Routine laboratory tests are not necessary when uncomplicated CAP is suspected.

- A WBC count and differential should be considered when adjunctive information is judged necessary to help decide whether to use antibiotics during management.\textsuperscript{3,46} The likelihood of a bacterial cause generally increases as WBC counts increase above 15,000-20,000/mm\textsuperscript{3} and, especially when associated with fevers higher than 39°C (102°F), \textsuperscript{3,20,22,39} but these relationships have not been documented in all studies.\textsuperscript{38,51}

- A sputum Gram stain and culture on high quality specimens (<10 squamous epithelial cells and >25 WBC’s per low powered field\textsuperscript{1}) should be considered when managing older children and adolescents with more severe disease. Pleural cultures are also considered particularly valuable prior to starting antibiotics when managing a child with an effusion.

- Blood cultures are not recommended as routine studies for outpatients (likelihood of positive culture is less than 3%).\textsuperscript{20} Blood cultures are recommended for inpatients with more severe forms of pneumonia and patients under 3 months of age.\textsuperscript{20}

- Neither cultures, PCR, nor serologic testing for specific pathogens such as viruses, *M. pneumoniae*, or *C. pneumoniae* are routinely recommended.\textsuperscript{1,21,42}

- C reactive protein (CRP), erythrocyte sedimentation rate (ESR), and other measures of acute phase reactants are not specific enough to recommend as routine studies.\textsuperscript{27,38}

- PPD and other skin testing are always considered appropriate for children with a history of exposure.

- When historical, physical, radiologic, or laboratory findings are inconsistent, additional studies should be considered to evaluate for alternative or coincident conditions, such as foreign body aspiration or immunodeficiency.

**Treatment Recommendations**

- High dose amoxicillin or amoxicillin/clavulanate (80-90 mg/kg/day based on amoxicillin component) for 10 days should be used to treat children 60 days to 5 years of age when a bacterial cause for CAP is likely. *S. pneumoniae* is the most commonly identified bacterial organism for outpatient children in this age range.\textsuperscript{5} However, non typeable *H. influenzae* may be causative as well. 16.7% to 35% of *S. pneumoniae* isolates from patients with community acquired respiratory tract infections (all ages) in the U.S. are resistant to penicillins.\textsuperscript{19} Fifty-seven percent of *S. pneumoniae* isolates from blood/CSF specimens cultured at Children’s Hospital of Pittsburgh in 2006 were nonsusceptible to penicillin, including both intermediate and resistant strains. Resistance of *S. pneumoniae* to penicillin (including amoxicillin) is mediated through alterations in the penicillin-binding proteins. Using high doses of amoxicillin saturates the penicillin-binding proteins and is therefore considered a reasonable antibiotic option.\textsuperscript{25}

20.1% of *S. pneumoniae* isolates from the CDC core surveillance in 2005 were resistant to erythromycin, while 15% were resistant to TMP/SMX.\textsuperscript{18} An organism resistant to penicillin is often resistant also to erythromycin. Erythromycin resistance generally suggests resistance to all macrolides.\textsuperscript{9,12} For children with allergies to penicillin, a macrolide, cephalosporin or second generation fluoroquinolone with anti-pneumococcal activity may be considered.\textsuperscript{14,24}

- Practitioners should consider the use of a macrolide when treating CAP in a child greater than 5 years of age. Macrolides usually provide effective coverage for *M. pneumoniae* and *C. pneumoniae*, the organisms most likely to cause CAP as children grow older. A macrolide will concurrently...
provide coverage for penicillin sensitive \textit{S. pneumoniae}, the most common bacterial cause of CAP in all age groups.\textsuperscript{24} Treatment duration is 7 to 10 days, although a five-day course of azithromycin may be used.\textsuperscript{18,24,51}

**Inpatient Management Considerations**
- Specific admission criteria include ill appearance, dehydration, hypoxemia, respiratory distress, inability to tolerate oral liquids, failed outpatient treatment, or social concerns that would limit proper treatment or follow-up.
- ICU evaluation should be obtained for severe respiratory distress, vital sign instability, sepsis, persistent hypoxemia despite supplemental oxygen delivery, or requirement for positive pressure ventilation.
- Pneumonia complicated by effusion or empyema may require chest tube placement and consultation with the surgical or intervention radiology service. Infectious Diseases or Pulmonary consultations are recommended in the management of complicated pneumonias.
- Discharge criteria include:
  a. adequate oral intake
  b. antibiotic therapies can be continued at home
  c. family has participated in discharge planning and understands and agrees with prescribed therapies and follow-up plans
  d. home is appropriate for continuing care
  e. follow-up physician is identified and agrees with the discharge plans with follow up within 24-72 hours.
- Follow-up x-rays in otherwise healthy children are not indicated as consolidation may persist radiographically for up to 4 weeks.\textsuperscript{13}

**REFERENCES**
10. CDC 2007, posting date. Active Bacterial Core Surveillance. [Online ]

**Guideline developed by Respiratory committee, Review coordinated by Andrew Nowalk, MD., and Kishore Valloody, MD.**


Improving Value of Health Care Delivery in Pediatrics:
The Role of the Pediatric Hospitalist

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Our Lady of the Lake Regional Medical Center, Children’s Hospital, Baton Rouge, LA

EDITORS NOTE:
Welcome to the new Quality and Safety column of Hospital Pediatrics. In this article, Dr Narang has provided us insightful perspective on the issue of value, an important yet underappreciated topic in health care. As hospitalists, we see perfectly poised to analyze and/or provide some of the most costly, and perhaps variable, care in our field. Building on this report, this column seeks to provide a forum for the promotion and discussion of quality and safety issues in pediatric hospital medicine. If you are interested in submitting an article, particularly if you have an illustrative case or project from your institution, please contact mshen@seton.org.

Introduction:
“Quality problems are everywhere, affecting many patients. Between the health care we have and the care we could have lies not just a gap, but a chasm”1 It is this ‘Quality Chasm’ that formed the basis for the Institute of Medicine (IOM) report released in March 2001 which focuses on developing a new health system for the 21st century. The report is emphatic: “Trying harder will not work. Changing systems of care will.”2 The Center for Medicaid and Medicare has used its influence as the administrator of Medicare to influence quality and performance improvement measurements in adult health care. The past decade has seen significant improvement in adult health care quality measurement, with the development of specific JCAHO measures and targeted pay for performance initiatives for hospitals. Unfortunately, with no similar federal influence in pediatric medicine, the “quality chasm” between adult and child health care has widened. This chasm is growing larger, despite the 320 billion dollars spent annually for children’s health care through Medicaid and SCHIP.3 Moreover, with almost every state recently facing yearly cuts in their Medicaid programs because of fiscal pressures, it is clear that they cannot continue to waste resources by paying for poor quality care that is clearly ineffective and unnecessary. Unfortunately, little if any of the resources are invested in improving quality of pediatric inpatients. Of the 18 private health insurance plans’ quality and pay for performance programs identified by Leapfrog: only 17 percent developed pediatric specific inpatient measures.2 Only 5 of 40 controlled trials of quality improvement efforts for children published between 1980 and 1998 addressed inpatient problems.

The Pediatric Hospitalists of Louisiana is a hospitalist group whose primary goal is to meet this challenge of decreasing the quality chasm by approaching the management of pediatric inpatient disease with a combination of evidence-based reviews, health information technology, and data driven performance measures. This group contracts with Our Lady of the Lake Regional Medical Center (OLOL) in Baton Rouge, LA, to provide inpatient care at OLOL Children’s Center. The hospitalist pediatric service (HPS) admitted over 3000 children in 2006 with access to approximately 50 inpatient beds, a 16 bed PICU, and a 24 hour Pediatric ER with 30,000 annual visits. At the onset of the establishment of HPS, there was a clear acknowledgement of the lack of evidence-based pediatric care in the Southeast Louisiana region, noting the wide variation of management of even the most common inpatient pediatric conditions. This wide variation of care often leads to a wide variation of outcomes—technical, operational, and financial. With greater than 80% of their patients’ healthcare costs paid by the LA Medicaid program, HPS recognized that such variation in care could have a significant negative impact on the return on investment of the LA Medicaid program. With this context, HPS identified the 10 most common pediatric inpatient diagnoses admitted to OLOL’s pediatric hospital this decade, and focused on developing a library of clinical pathways and flowcharts. The goals have been clear: 1) improve technical quality of care; 2) reduce cost of care; and 3) improve operational efficiency of care. In order to demonstrate the impact of this system on specific operational, financial, and technical benchmarks, HPS has began to develop a dashboard of data on several common pediatric inpatient diagnoses.

One example of the impact of standardization of processes has been on the inpatient management of bronchiolitis. Before the institution of a clinical pathway to guide clinicians, the management of bronchiolitis was often guided by individual practices, rather than established evidence based guidelines. This practice led to wide variation in management strategies and poor utilization of resources. In response, HPS developed a clinical pathway based on analysis of various published evidence based studies that examined the impact of steroid, chest x-rays, RSV testing, chest physiotherapy, and bronchodilators on the management of bronchiolitis. HPS then focused on implementing a pathway that identified 2 aspects of inpatient care that required more consistency: (1) decreased utilization of bronchodilators, and (2) decreased utilization of steroids. The strategy to improve these processes focuses on utilization of computerized order sets, implementation of a respiratory therapy (RT) protocol, and education of nurses and respiratory therapists. This clinical pathway for bronchiolitis was adopted by the HPS group and implemented in November 2006.

Evaluation of the impact of a standardized process for bronchiolitis on outcome measures focused on comparing the HPS group of patients from 2006 (prior to adoption of a clinical pathway) to the HPS group of patients...
from 2008 (1st quarter data). It should be noted that even though the HPS physicians were required to utilize the bronchiolitis pathway when managing their patients, often these patients were initially seen in the Pediatric Emergency Room, where individual physician practices often dictated management strategy. Process measures that were analyzed included: (1) % of patients who received ≥ 1 bronchodilator treatment and (2) % of patients who received ≥ 1 dose of a steroid. Outcome measures included (1) length of stay (LOS) and (2) variable direct cost/encounter.

Hospital costs are categorized as variable direct, fixed direct and indirect costs. The total cost of a patient care encounter is defined as variable direct plus fixed direct plus indirect cost. Hospital overhead is defined as the sum of fixed and indirect costs. Variable direct costs are those that vary with patient activity, such as laboratory tests, medications, surgical supplies, and nursing expenses. The 2008 HPS data currently shows a decrease in utilization of bronchodilators by 40% and a 50% decrease in utilization of steroids as compared to the 2006 data, leading to a 16% decrease in LOS and 13% decrease in variable direct cost. Readmit rate within 72 hours for the 2008 HPS group was 0.01% compared to 2.96% for the 2006 HPS group. There was no documented mortality in either group of patients and no PICU admission for any of the readmits. This is just the impact of a standardized process within a pediatric hospitalist group. When comparing the 2008 HPS patient data with data from patients cared for in 2006 by a group of non-hospitalists (comprised of over 30 individual physicians managing their own patients based on individualized processes), the impact of the standardized process was even greater. The 2008 HPS providers utilized 60% less bronchodilators and 70% less steroids than their 2006 non-hospitalists colleagues, leading to a 23% decrease in LOS and 20% decrease in variable direct cost. The readmit rate within 72 hours for the 2008 HPS group was 0.01% compared to 2.88% for the 2006 non-hospitalist group. There was no documented mortality in either group of patients and no PICU admissions for any of the readmits.

In this retrospective study in a community hospital in Southeast Louisiana, we have clearly demonstrated that the utilization of a standardized process can lead to high value outcomes in the management of a common pediatric diagnosis. The group that utilized an evidenced-based clinical pathway to help deliver its care clearly achieved superior outcomes when evaluating resource utilization, length of stay and cost data. In terms of analyzing morbidity associated with higher value outcomes, initial data actually indicates a decrease in readmission rates by the 2008 HPS group and no increase in mortality or readmissions to the PICU.

We hope to use this study as a platform for a national discussion on how pediatricians can lead the discussion on how to improve health care outcomes for our patients. In their book, Redefining Health Care, Michael Porter and Elizabeth Teisberg argue that “the way to transform health care is to realign competition with value for patients. Value in health care is the health outcome per dollar of cost expended. If all system participants have to compete on value, value will improve dramatically.” For example, in Southeast Louisiana, patients and other payers of quality should have access to data that compares providers in the management of a variety of pediatric diagnoses. There should be a real competition for value based on results, and those providers that demonstrate the best value based outcomes should be rewarded. Imagine a pediatric health care delivery system where participants are incentivized to deliver high value care for bronchiolitis, asthma, gastroenteritis, osteomyelitis, and so on. The U.S. health care system has no choice but to be reorganized, and those groups that position themselves strategically by utilizing information technology, transparent databases, and innovative 3rd party payer systems are the ones that will succeed.

The field of Pediatrics can be a model for the U.S. Health Care system if our leaders take careful strategic steps on how to move forward. The solution is complex as it will take cooperation at many levels. Moreover, though this study focuses on only on the inpatient aspect of disease management, we need to recognize that true competition for health care value has to occur across “the full cycle of care.” This idea is echoed by Donald Berwick, CEO of IHI, in his discussion of the “Triple Aim,” where he suggests that reorganization of our health care system has to focus on improving all three of these areas: (1) The health of a defined population, (2) The experience of care by people in this population, and (3) the cost per capita of providing care for this population. For example, using the Triple Aim model, we would re-examine the management of bronchiolitis in our community, and partner with the essential stakeholders to develop a system where all providers including hospitalists, outpatient pediatricians, and ER physicians are incentivized to deliver the highest value outcome for the patient with bronchiolitis (use of standardized process in all settings that reduce utilization of unnecessary resources, including reducing emergency room visits and hospital admissions).

This study is only the first of many we hope that will begin to explore the concept of value based competition in pediatrics. We cannot afford to waste more resources on processes that are clearly unsafe, ineffective, inefficient, and inequitable. We hope that our leaders in pediatrics will see that one of the first steps towards this goal is to develop a national database of transparent value-based process and outcome measures. This will take an extraordinary effort requiring levels of cooperation that are unprecedented in our fragmented health care system. As we urge our national leaders to make this happen, the reality is that all of us can begin at a local level to define and measure quality. We certainly aren’t waiting in Southeast Louisiana. We cannot afford to.

REFERENCES
Collaborative Developments in Complex Care

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It has been an eventful year for medical providers of medically-complex children (MCC). MCC are a subset of children with special health care needs (CSHCN) or children and youth with special health care needs (CYSHCN). CSHCN are defined as “having or being at risk for having a chronic physical, developmental, behavioral or emotional condition that requires health and related services of a type or amount beyond that required by children generally.”1 Per surveys of the US pediatric population 12% to 18% of children meet this definition for CSHCN.2,3 There is no single agreed upon definition for MCC and the literature also refers to this group as medically fragile, or medically complex and fragile. One characterization of MCC states that “a small and growing subset of CSHCN are medically fragile with complex chronic conditions that involve several organ systems and require multiple specialists, technological supports, and community services.”4

In late 2007, the AAP Section on Hospital Medicine (SOHM) established a new Subcommittee on Complex Care. Next, in the spring, an international group of complex care providers convened to develop quality improvement (QI) initiatives for MCC. The following month, the Pediatric Academic Societies (PAS) Conference served as a venue for a record nine platforms and posters on complex care issues. The momentum is building. It is an opportune time to collaborate with other providers focused on the care of MCC.

SOHM Complex Care Subcommittee

In October 2007, the SOHM Executive Committee approved the formation of a Complex Care Subcommittee. The Subcommittee actively communicates via an electronic listserv® on various topics including systems organization, patient care, collaboration with other providers, medical education, and research ideas. Four areas of interest to the Subcommittee are being spearheaded as follows:

- Current State of Inpatient Complex Care: Rishi Agrawal, MD, MPH, FAAP, ragraezal@childrensmemorial.org
- Coordination with Outpatient Providers: Annique Hogan, MD, FAAP, Hogan@email.chop.edu
- Clinical Pathway Development: Noeme Adame, MD, FAAP, adamen@uthscsa.edu
- Educational Resource Development: Tamara Simon, MD, MPH, FAAP, Tamara.simon@hsc.utah.edu

If you are interested in participating in any of these projects, please e-mail the appropriate coordinator. If another aspect of complex care interests you, feel free to use the Subcommittee to organize a collaborative effort.

To join the Complex Care listserv® or to get more information about the Subcommittee, email the chair, Allison Ballantine, MD, FAAP, at BALLANTINE@email.chop.edu.

CHCA Quality Improvement Meeting for Medically-Complex Children

In April 2008, the Child Health Corporation of America (CHCA) and Children’s Hospital Boston co-sponsored a meeting to discuss quality improvement (QI) for MCC. CHCA represents 42 freestanding children’s hospitals that have an agreement to share de-identified inpatient admission data on all of their patients. Meeting participation was also open to providers at non-CHCA affiliated hospitals. Along with CHCA staff, Jay Berry, MD, MPH, FAAP, and Kathy Jenkins, MD, MPH, FAAP, of Children’s Hospital Boston were also instrumental in organizing the meeting.

Healthcare providers from programs in Boston, Chicago, Little Rock, Milwaukee, Philadelphia, Salt Lake City, and Toronto discussed experiences with both inpatient and outpatient programs for MCC and an agenda of collaborative QI efforts. The group brainstormed quality measures for the care of both inpatient and outpatient MCC within the framework of “Six Aims for QI” put forth by the Institute of Medicine. The Six Aims are as follows: Safe, Effective, Patient-Centered, Timely, Efficient, and Equitable. One subgroup is actively working on defining the population of MCC, while several others are developing ideas raised at the meeting into specific quality measures.

Among participants there was a consensus that ongoing collaborative QI efforts for MCC should be more inclusive of all medical professionals interested in complex pediatric care. The working group plans to use the SOHM Complex Care Subcommittee’s listserv® to communicate about future activities, and to reconvene at future national pediatric meetings (such as AAP, PAS and PHM) to encourage broader participation. If you are interested in learning more about this collaborative QI effort, please contact Jay Berry, MD, MPH, FAAP at jay.berry@childrens.harvard.edu.
PAS Meeting 2008
Several pieces of original research on complex care were presented at the April 2008 PAS meeting. While two posters described specific programs,5,6 others examined trends in hospitalizations of MCC,7 inpatient resource use for MCC following tracheotomy,8 and infection control identification for children with CSF shunts.9 A poster and platform presentation addressed fundoplication in children with neurological impairment and GERD.10,11 Another platform presentation summarized the results of the Pediatric Research in Inpatient Settings (PRiS) Survey questions on complex care.12 A final platform session focused on identification of presenting conditions of children who are hospitalized at both children’s and non-children’s hospitals, and presented data on MCC in both settings.13

Presented Abstracts may be viewed online at http://www.abstracts2view.com/pas/index.php.

Discussions are ongoing regarding applying for a new Complex Care special interest group (SIG) via the Academic Pediatric Association. This Complex Care SIG would span both outpatient and inpatient care of MCC in order to promote academic activity regarding MCC.

Future Directions
The events of the past year are laying a framework for ongoing collaborative efforts in clinical care, research, education, and advocacy for MCC. There may be other important efforts in place that are not mentioned in this update. If you have an interest in this area (or know someone who does), there are many opportunities to get involved and collaborate in this rapidly-emerging field. We encourage broad participation from all medical professionals and allied health professionals with an interest in MCC. We welcome those who focus on inpatient care, outpatient care, or both. Please feel free to contact any of the leaders listed above to receive more information.

Endnotes

Interested in submitting an article on Complex Care? Contact Mary Rocha, MD, MPH, FAAP at mr039001@bcm.edu.
Q: I have heard that there is a new code for use with hospitalized newborns, CPT 99477. When should I use this code?

A: CPT 99477 is a new code for use beginning in January 2008. Since many pediatric hospitalist programs may care for newborns as part of their job, it is important to learn and understand the use of this new code. CPT 2008 states that the definition of code 99477 is:

*Initial hospital care, per day, for the evaluation and management of the neonate, 28 days of age less, who requires intensive observation, frequent interventions, and other intensive care services*

This new code is intended to fill the gap between CPT codes 99221-99223 (initial hospital care codes of the neonate not requiring intensive observation, frequent interventions, and other intensive care services) and CPT 99295 (initial inpatient neonatal critical care, per day, for the evaluation and management of a critically ill neonate, 28 days of age or less). This code is intended to be used with infants that require intensive services but not critical care services.

It may be best to think of initial hospital care codes for newborns along a continuum:

99431: the normal newborn  
99221-99223: the ill newborn  
99477: the newborn requiring intensive services  
99295: the critically ill newborn

Let’s use the example of a 2.5kg infant born vaginally at 36 weeks gestation to a mother with unknown Group B streptococcus status. If the mother had developed fever during delivery, the infant was mildly symptomatic, a CBC and blood culture were ordered and antibiotics were started, then CPT code 99222 would be used. If instead the infant was grunting and tachypneic, required supplemental oxygen and admission to a NICU or special care nursery for intensive monitoring and further sepsis evaluation, then the new CPT code 99477 would be used. If the infant was in shock, or required intubation or pressor support, then CPT code 99295 would be used.

It is important to remember that CPT 99477 is a bundled code. The included/bundled services are the same as those included in the initial neonatal critical care code CPT 99295. These services include, but are not limited to: monitoring, pulse oximetry, CPAP, peripheral/central/umbilical catheterization, IVF administration, lumbar puncture and bladder catheterization.

Remember also that CPT 99477 is only an initial hospital care code. Subsequent hospital days requiring intensive care should be reported with CPT 99298 to CPT 99300. These subsequent intensive care codes are based on current infant weight:

99298: subsequent intensive care, per day, for infants < 1500 grams  
99299: subsequent intensive care, per day, for infants 1501-2500 grams  
99300: subsequent intensive care, per day, for infants 2501-5000 grams

Of note, once the infant’s weight is >5000 grams, then use the subsequent hospital care codes CPT 99231-99233. If the infant became unstable or critically ill, then use code 99296, subsequent inpatient neonatal critical care, regardless of weight.

Since this code is new, it may take some time for payers to recognize the code and reimburse your work. Remember, just because you code correctly, this does not mean that you will be reimbursed. However, this should not discourage you from correctly using this new code when appropriate.

RESOURCES FOR MEMBERS

Pediatric Hospitalist Programs of North America – Newly Updated
The Pediatric Hospitalist Programs of North America resource can be used by individuals and programs to network as well as by members to seek out contacts and job opportunities in a location of interest. Visit the SOHM web site at www.aaphospmed.org for more information.

Neonatal/Pediatric Transport Team Database – Newly Updated
The Neonatal/Pediatric Transport Team Database is a resource for professionals who are interested in reviewing transport programs across the country. Visit the Section on Transport Medicine web site at www.aap.org/sections/transmed for additional information.

Have a coding conundrum? Contact James O’Callaghan, MD, FAAP at jocallaghan@aap.net with your question.
Grant Recipients talk about the NICHQ Forum

Anu Subramony, MD, MBA, FAAP, as3353@columbia.edu
Assistant Director, General Pediatrics Inpatient Service, Morgan Stanley Children’s Hospital of New York

Jack Perceelay, MD, MPH, FAAP, jperceelaymd@yahoo.com
E.L.M.O. Pediatrics

The National Initiative for Health Care Quality 7th Annual Forum “Excellence through Innovation” showcased significant innovation in quality improvement efforts. NICHQ (pronounced nitch-cue) is “an action-oriented organization dedicated to improving the quality of health care provided to children.” Its four part improvement agenda is:

1) prevention of childhood obesity
2) promoting evidence based, family centered care for children with chronic conditions
3) purging harm from children’s health care
4) promoting equity in care and outcomes for all children

Given the obvious overlapping interests between NICHQ’s goals and our goals as hospitalists, it’s clear that we hospitalists are key players in achieving goals 2, 3, and 4 on the inpatient setting, and have responsibilities with obesity as well. NICHQ is similar to the Institute for Healthcare Improvement run by Don Berwick, champion of the 100,000 lives and 5 Million lives campaigns. NIH has a pediatric node that has done wonderful work (with the support of many pediatric organizations) extrapolating adult oriented materials to pediatrics for projects such as rapid response teams, catheter related blood stream infections, and ventilator associated pneumonia, but NICHQ is unique with its exclusive focus on pediatrics.

What’s striking about the three day NICHQ meeting of 700+ pediatric quality improvement experts and enthusiasts is the limited pediatric hospitalist presence. As NICHQ CEO Charlie Homer noted in his keynote speech at the 2007 Pediatric Hospital Medicine Meeting in Salt Lake City, we share the same goals. Yet there were only a handful of hospitalists in the audience. True, some of the themes are replicated in hospitalist meetings, including PDSA cycles, reliability science, and hand-off standardization, but it’s mostly doctors who are present at the typical PAS, AAP, or SHM meetings. What’s unique about NICHQ is the multi-disciplinary approach encouraged by the different professionals, interests, and international perspectives represented.

For us as hospitalists to make a difference, we need to collaborate and expand our horizons. NICHQ is one way for us to do this. After attending this meeting, the benefits are clear, and it’s obvious why the AAP SOHM is encouraging more active hospitalist participation in NICHQ by offering 8500 scholarships to this meeting. Next year’s meeting is March 10-12 in Dallas. Please think about going, or sending someone from your program. It’s particularly important to get community hospitalists to attend this meeting, since most of the representatives come from children’s hospitals. Stay tuned to the listserv® for announcements about next year’s scholarship program.

To find out what you missed in Miami (what happens in South Beach, stays in South Beach), go to www.NICHQ.org. In fact, you can access handouts from the 2006 meeting by going to the NICHQ website, and navigating to the 7th Annual Forum Section and clicking on the meeting materials tab. (It’s free, so keep it quiet.) The take home message is really to encourage greater collaboration between hospitalists and NICHQ. A partial listing of relevant inpatient topics includes: quality improvement fundamentals (full day workshop), expanding parent/provider partnership to improve quality and safety (full day workshop), a practical approach to purging harm from pediatric healthcare (full day workshop), pediatric nursing workshop strategic planning, hot topics in the 5 Million Lives campaigns, asthma guidelines, nurses take the quality lead, transforming academic hospitals, timely treatment and recognition of shock, and standardization of patient hand-offs.

An Asthma Success Story

Mamta Reddy, Director of SOBRAP, Pat Wanieweski, Asthma Coordinator for New York State Department of Health, and Humayun J. Chaudhry, the Commissioner of Health Services of Suffolk County Department of Health Services, held an educational session revolving around the care of asthma at a local and state level. Dr Reddy reviewed the new guidelines and discussed the efforts of the South Bronx Asthma Partnership which provides provider education and medical and non-medical asthma management for inner city patients and families in New York City. Pat Wanieweski described collaborative efforts to reduce the burden of asthma in New York City by forming improvement teams to organically spread innovations in asthma care through primary care practices, community health centers, school based clinics, day cares, hospitals, and emergency departments. Dr Chaudhry showed how a Medicaid demonstration project was able to reduce ER visits and hospitalizations by more than 60%, by identifying high resource utilization patients, focusing on teaching these patients home management skills and utilizing public health nurse visits. See page 27 for all SOHM grant opportunities.
Family-Centered Care…
Jugglers Needed! How hospitalists can create balance between patient care, education and work during family-centered rounds.

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Introduction
A growing body of research exists to support the positive impact that family-centered care (FCC) creates for patients, patients’ families, physicians-in-training and practicing physicians.1-3 Family-centered rounds (FCR) is a subset of family-centered care in an inpatient setting and described by Sisterhen et al. as facilitating an interface between patients, families and medical professionals and allowing for the development of a unified plan of care.4 Equally as important, in the academic setting FCR constitutes an opportunity for both teaching and assessing medical students and residents in the context of real-life situations.

This article focuses on education and FCR. It reviews the theory of contextualized learning, describes what can be learned and assessed during FCR, and provides practitioners with recommendations for maintaining a balance between education, work and patient care on rounds.

Contextualized learning theory
FCR is an example of a pedagogic strategy used in a contextualized learning environment. The notion of contextualized learning suggests that knowledge is most effectively acquired when it is framed within the context in which it will be used. Koohang and Harman state that contextualized learning and teaching situations permit theoretical learning and proficiency development through direct participation in real-life learning environments. Students are able to integrate “propositional knowledge” with “experiential knowledge”, thereby “[linking] theory to action.” This type of “deep learning” fosters the development of higher order or critical thinking skills.5

According to Fullan, learning in context is effective because it is targeted, situational, and social; promoting shared and collective knowledge and engendering commitments. Learning in context also creates situations that specifically promote lifelong learning, including opportunities to learn from others, the selective retention of good ideas and best practices, and monitoring of performance.6

Medical school clerkships and residency are historically rooted in contextualized learning, so the trend towards workroom conference rounds and away from rounds with the patient stands in contrast to precedent. Fortunately, the FCC movement is bringing us back to the bedside.

What can be learned?
FCR is an experience that is full of teachable moments. Modeling behaviors is one of the more obvious ones. Examples include demonstrating effective communication while navigating a difficult situation or engaging a scared or reluctant patient. Physical exam findings provide concrete and memorable learning experiences. Even situations that are not handled correctly (e.g., giving medical information in an inappropriate manner) can serve as an educational opportunity. These teachable moments simply cannot occur in a conference room without the presence of the patient and/or their family.

Furthermore, the concept of presenting in front of patients and families on FCR can serve as a motivator to improve medical knowledge and communication skills. Paradise Black et al. found that medical students reported spending more time understanding their patients’ medical issues in order to be better prepared for FCR and adequately present the information to the patients and families.3 One student stated that, “Communicating with the families in layman’s terms also forced me to truly understand the problems and our plan; in order to communicate it in the most basic way.” Another student noted that:

I feel encouraged to be completely prepared for rounds in order to show parents that the individuals who are taking care of their child are informed and educated. This motivated me to do as much research as possible into the disease process taking place.

Finally, teaching in the family-centered environment is not instructivist or from the top down. Anyone in the room—patient, family, nurse, staff, medical student, or physician—can contribute and provide teaching points. In order to foster this concept, it may behoove the attending to set the tone of the learning environment by thinking of his or her role as that of the “lead learner” rather than an all-knowing disseminator of knowledge.5

What can be assessed?
Not only is FCR important for teaching, it is an effective venue for assessment. The Accreditation Council of Graduate Medical Education (ACGME) mandates that pediatric residents provide culturally effective, developmentally and age-appropriate, and effective family-centered care.7 In addition to these requirements, a variety of assessment ‘tools’ have been identified by the ACGME for outcomes assessment determination. Some of these tools (e.g.
checklist evaluation of live performance) easily lend themselves to the FCR experience.\(^9\) Swing advocates for multiple administrations of qualitative assessments, stating: “Ongoing implementation of snapshot methods of assessment involving observation or interaction focused on specific aspects of resident performance will be more helpful”.\(^9\) Given these specifics, FCR is an ideal method for the repeated qualitative assessment of ACGME competencies, potentially eliminating some of the logistical issues associated with evaluation as presently practiced.\(^9\)

**Balance Between Patient Care and Education**

The challenge of balancing patient care and promoting educational opportunities during FCR is not a new problem. Families need and deserve the opportunity to be involved in the discussion of the care of their children. It is easy to underestimate the impact physicians have upon the experience a family has while their child is in the hospital. Families are frightened, frequently navigating the hospital system for the first time. FCR allows the medical team to advocate for their patients and families on a more personal level and in a highly involved way. Having a sick child is the worst nightmare most people could ever imagine—knowing that there is a team caring for them and feeling involved as a member of that team gives the families a sense of control, a sense of calm. It goes a long way towards providing peace of mind.

On the educational side residents have increasing workloads and decreasing work hours, making each minute spent in the hospital valuable. While it is true that every patient presents an opportunity to learn, it is impractical to spend 15 minutes discussing each patient on the service. Naturally, organized rounds present more time for teaching, while, at the same time, addressing the needs of the patient and families. Here are a few recommendations to help mediate resident education and patient care needs in order to conduct efficient FCR.

1. Prioritize the patients so the residents know which patients will be presented first. For example, see all the discharges first or the sickest patients first and then the discharges. Each attending should decide what works for him or her, and then be consistent.
2. Do your “homework”. Review vital signs and laboratory data prior to rounds and then just have the presenter touch on what was abnormal.
3. Ask nursing to enlist the families’ involvement in rounds. Be sure to have a consistent time for rounds and share that with nursing and the families.
4. Have residents and medical students give problem-directed presentations.
5. Make expectations about roles clear (written and verbal format) at the beginning of the rotation and review as needed. For example, as you enter the room, the process can be akin to running a code blue. “Medical student Mark you’ll be writing the orders, intern Isabel you’ll conduct introductions…”
6. In order to preserve the autonomy of the senior residents as they run rounds, have them observe how you conduct FCR. Adopt the philosophy that you are partners in the lead learner role and spend time with them outside of rounds to ensure they understand how to conduct FCR. Then, let them do it.
7. Set an expectation for the residents and students that a plan has already been formulated by them.
8. Establish teaching goals for rounds. Choose patients on your service about which you can make specific teaching points and spend more time on those patients during rounds. Or, as Dr. Glen Tamura suggested at the FCR panel discussion at the APA SIG on FCG in Hawaii 2008, make a habit of providing two quick teaching points on each patient.
9. Examine the patient while the resident is presenting the data.
10. Bring charts on rounds and identify someone as a scribe for orders.
11. Check yourself—if parents or patients require a more prolonged discussion reassure them that you will return. Include the resident when you return to talk with the family.
12. Watch the clock. No one is listening to you if rounds last too long.
13. Enlist the senior resident to keep you moving.

Whether you have 5 or 35 patients on your service, keeping rounds moving while ensuring that the residents are learning and the patients and parents feel attended to is an art. It takes practice and persistence. Don’t let the groaning in the background deter you. The more you do it, the more smoothly it will go.

**REFERENCES**


**Interested in submitting an article on Family Centered Care? Please contact Jennifer Maniscalco, MD, MPH, FAAP at jmaniscalcomd@gmail.com.**

**Section On Hospital Medicine**

**Reference current pediatric hospitalist resources. Find out what other programs are doing. Visit the SOHM Web site.**

Visit the SOHM Web site.

**http://www.aaphospmed.org**

And join the SOHM LISTSERV®. E-mail Nicole Alexander at nalexander@aap.org
Child Life Specialists Join the Section on Hospital Medicine

Chris Brown, MS, CCLS. Director, Child Life and Family Centered Care
Dell Children’s Medical Center, Austin, TX
Child Life Council Liaison to the AAP Committee on Hospital Care

On May 15th, 2008 the Advisory Committee to the Board on Membership (ACBOM) approved a bylaw referendum to allow Certified Child Life Specialists (CCLSs) to join the Society on Hospital Medicine (SOHM) as affiliate members. This gesture reflects the important and successful working partnership between physicians and CCLSs in hospital settings. The inclusion of Child Life programs in pediatric settings has become widely accepted and advocated by the American Academy of Pediatrics (AAP) and other organizations such as the National Association of Children’s Hospitals and Related Institutions (NACHRI) and The Joint Commission.

Child Life programs strive to promote optimum development of children, adolescents, and families, to maintain normal living patterns, and to minimize psychological trauma. Child Life professionals are specially trained in child development and the effects of illness, injury, disability, and healthcare or hospitalization on the child and family. Utilizing therapeutic play techniques, relationship building, communication skills, educational interventions, and emotional support, the CCLS seeks to provide a normalizing and supportive experience for children and families so as to enhance effective coping and understanding.

The CCLS works collaboratively with physicians and other healthcare professionals to positively influence care that strives to be psychosocially sound, developmentally appropriate and family-centered. Interdisciplinary collaboration is fundamental to the quality of pediatric health care delivery, including physicians at every level of their training and clinical practice working side by side with CCLSs. This partnership has proven effective in facilitating pain management, enhancing compliance with treatment protocols, and promoting family-centered care. In addition, physicians report that their job is often made easier with the assistance of CCLSs, for example, to provide developmentally appropriate explanations and support the child and/or family during procedures. According to Dr. Mark Shen, Lead Hospitalist at Dell Children’s Medical Center in Austin, TX, “Child Life has been invaluable in my practice for those daily situations where I’ve planned a test or intervention but lack both the time and training to adequately prepare the child, and family, for the event. I have also found that child life specialists are in a better position to evaluate the emotional and developmental well-being of children with their ability to remove many of the intimidating ‘layers’ of the hospital environment. And, frankly, they simply create happier places for kids, which always reminds me of why I love being a pediatrician.”

Specific ways a Certified Child Life Specialist can support care by medical staff include:

1. Conducting informal and formal developmental assessments (such as the Denver Development Screening Tool).
2. Assisting in the physician or other provider’s age-appropriate communication with patients and/or family members (e.g., explaining diagnoses, medical procedures, treatment regimens, or side effects such as hair loss).
3. Teaching and facilitating “positioning for procedures” to enable safe and effective medical care (see figure 1).
4. Accompanying the healthcare team during medical procedures by providing distraction (also known as alternative focus techniques) and other coping techniques during procedures, thus maximizing the child’s cooperation and often minimizing or precluding the use of sedation.
5. Supporting family members during anesthesia induction, resuscitation, bereavement, or other challenging events.
6. Educating medical students or new residents regarding psychosocially sound, family-centered care.

REFERENCES

Child Life Specialists Now Eligible for Section Membership!!

The AAP now accepts Child Life Specialists as Affiliate Members into the Section on Hospital Medicine. The other approved Affiliate Member categories for Section membership are Nurse Practitioners and Physician Assistants.

Child Life Specialists are experts in child development, who promote effective coping through play, preparation, education, and self-expression activities (Child Life Council). For information on membership please visit the Academy web site at www.aap.org.
What’s New?

NEW!!
Subcommittee on Research
Karen Wilson, MD, FAAP
Chairperson
Karen_wilson@urmc.rochester.edu

We are very excited to announce the formation of the Research Subcommittee for the SoHM! The purpose of the subcommittee is to further the research agenda of the pediatric hospitalist community, and support pediatric hospitalist research nationally. We met informally at the PAS in Hawaii. Some of our initial ideas include doing a needs assessment of the PHM community to see what support our colleagues need, working with PRIS to increase its capacity and infrastructure, and creating workshops on using the large national inpatient datasets. We also have a listserv for members. The subcommittee is open to anyone interested in pediatric hospitalist research. If you would like to join us, we will be meeting at the Pediatric Hospital Meeting meeting in Denver, or you can email Karen Wilson, chair, at karen_wilson@urmc.rochester.edu.

PLEASE NOTE: We are planning a workshop organized by Lisa Simpson at the Cincinnati Children’s Hospital Medical Center on HCUP inpatient datasets in conjunction with an existing 1.5 day workshop on HCUP data in general. If you have any questions about the workshop, contact Karen Wilson at karen_wilson@urmc.rochester.edu or 585-273-1679.

Interested in working with the new Subcommittee on Research?
Contact Karen Wilson, MD, FAAP at karen_wilson@urmc.rochester.edu.

Subcommittee on Complex Care
Allison Ballantine, MD, FAAP
ballantine@email.chop.edu

It has been another busy season for the Complex Care Subcommittee. For a full update on the broad issues of complex care, please see Rishi Agrawal’s column on developments in Complex Care in this issue. In terms of activities specific to the subcommittee, we launched our listserv® and have seen many interesting discussions around clinical and administrative issues. We also have witnessed an enthusiastic populating of the SoHM Library with educational materials relating to complex care. We are looking forward to the hospitalist meeting in Denver where we will have a round table discussion exploring issues relating to inpatient services caring for medically complex patients.

Interested in Complex Care or related areas? Want more information about the plans and workings of this subcommittee? Write Allison Ballantine, MD, FAAP at ballantine@email.chop.edu to get involved!

Subcommittee on Community Hospitalists
Beth Robbins, MD, FAAP
Chairperson
erobbins@aahs.org
Jack Perelay, MD, MPH, FAAP
Exec Comm Liaison
jperelaymd@yahoo.com

The Subcommittee on Community Hospitalists recently hosted two conference call meetings for members to meet each other and to begin discussions about goals and projects for the committee. Work was begun on a mission statement for the group. The need to express the value of our work was discussed and ways to partner with existing networks and projects that are examining such issues. Short term goals are 1) fostering communication

Continued on page 27
am honored and excited to have been elected to the AAP SOHM Executive Committee.

I grew up in Florida, majored in Russian language and literature at Dartmouth College, got my MD from the University of South Florida, and completed my Pediatric residency at the University of South Carolina in Columbia. After residency, I joined the Children’s Clinic in the upstate of SC, a traditional practice with rotating hospital duties. Some of us aren’t designed for well visits, and three years later I became an academic hospitalist at Greenville Memorial Hospital.

At Greenville, the director of inpatient pediatrics introduced me to the then Provisional AAP Section on Hospital Care. I became active on the listserv®, joined many hospital committees, and got involved in many “systems” issues, but the die was cast after that first meeting in San Antonio, Pediatric Hospitalists in Academic Settings. The most enthusiastic, intellectually curious group of people ever assembled, dedicated to the acquisition of knowledge and the health of children.

I still have the attendee list with brief job descriptions next to several of the names (you may not remember what you were doing five years ago, but I do). The list substantiates Jack Percelay’s aphorism, “if you’ve seen one hospitalist program, you’ve seen one.”

Last year I returned to Columbia, lured by the academic opportunities with the school of medicine, my older but still unparalleled attendings from residency, and the promise of a new freestanding Children’s Hospital. This position affords me more time to work on hospitalist issues and serve on committees like this one and the subcommittee for Family Centered Care. Unfortunately for section members, I also have time to subject them to even more prolific listserv contributions.

Every PHM meeting has been a great success, and I have a strong kinship with the rapidly evolving pediatric hospitalist community. My current position combines aspects of an academic medical center and a community hospital, giving me a somewhat unique and broad perspective. Collaboration and flexibility have served me well in hospital medicine and should help me contribute to the work of the section. I have strong interests in evidence based medicine, medical education, and family centered care, and will advocate for these principles as well as for the children and hospitalists the committee serves. Issues the committee will face are standardization and cost effectiveness of care, original research, post-residency training, career satisfaction and longevity, and recruitment. One key issue which I would like to address is the tension between standardization of care and clinician autonomy. I will strive to continue the excellent work which has been done, and build on it, trying to keep in mind the community hospitalist, the academician, the resident interested in hospital medicine, and, of course, the children. Thanks for electing me to your committee.

Available Now!
PREP® Pediatric Hospital Medicine Study Kit

New from the American Academy of Pediatrics trusted Pediatrics Review and Education Program (PREP®), the Pediatric Hospital Medicine Study Kit is a collection of questions, critiques and articles published in the pertinent 2006-2008 editions of PREP Self-Assessment.

This indispensable and affordable study kit is a great way to enhance the knowledge and skills needed to provide excellent patient care and prepare for Maintenance of Certification™ (MOC).

The PREP® Pediatric Hospital Medicine Study Kit contains:

- 213 PREP Self-Assessment questions from 2006-2008 focusing on Hospital Medicine related topics
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- Answer Key
- Spiral bound book format

For more information contact Monique Evelyn at mevelyn@aap.org or call 1-847-434-4728.
Subcommittee Updates, continued from page 25

within the group by distributing contact information and 2) reaching out to other SOHM members on the website and at the annual meeting in Denver this July.

Any members interested in working with the committee should contact Beth Robbins, MD, FAAP at erobbins@aahs.org. Any members interested in contributing to the Community Hospitalists column of the SOHM news journal should contact John Pope, MD, MPH, FAAP at j pope@phoenixchildrens.com.

Subcommittee on Palliative Care
Maggie Hood, MD, FAAP
Margaret.hood@orhs.org

Glad tidings!! After much effort, hard work and perseverance on the behalf of many individuals committed to Pediatric Palliative Care, we are happy to announce that provisional status of the American Academy of Pediatrics Section on Pediatric Hospice and Palliative Medicine (SPHPM) was granted in May 2008. At the present time, the details of AAP staff assignments are pending. Membership application, activities and goals will be forthcoming.

The SPHPM Steering Committee is very excited to have the educational and advocacy expertise of the AAP as the development of the Section unfolds, and will work with interested members to ensure their needs are addressed. One of the most critical elements at this very moment is the subject of board certification for Palliative Care. In 2007, the American Board of Medical Specialties assumed the role of certification for Hospice and Palliative Medicine. Ten certifying boards are participating in this, including the American Board of Pediatrics.

Application for the first certifying board has closed. The next certifying exams will be held in 2010 and 2012. After that, one must have completed a fellowship in Palliative Care to qualify for board certification. As of now, there are three fellowships in Pediatric Hospice and Palliative Medicine. This is a crucial factor since the field of Palliative Care is calling for more qualified providers to educate and provide expertise to a growing number of patients and families. Please be proactive in evaluating your interest, practice experience in Palliative Care and consider applying for certification.

The SOHM Subcommittee on Palliative Care will be retired and folded into the new Section as of July 30, 2008. I would like to thank the members of this Subcommittee for the commitment and interest in moving this field ahead. We welcome your continued participation and will keep you posted as the details unfold.

Should you have any questions, or if you need more information about the Provisional Section or certification, please contact Maggie Hood, MD, FAAP at Margaret.hood@orhs.org.

Section on Hospital Medicine Grant Opportunities
The Section funds a number of opportunities for SOHM members throughout the year. Stay tuned to the Section LISTSERV® and SOHM web site at www.aaphospmed.org for details.

AAP Legislative Conference
Over 1,900 pediatricians and other interested individuals throughout the nation participate in the Academy’s annual legislative conference. The conference planners instruct attendees on the overall state and federal legislative process, develop advocacy skills, and introduce strategies and techniques for utilizing the media.

Travel Grant: All travel and meeting-related expenses as outlined in the Academy’s travel policy
(1 - last approved in August/September 2007)
Next Conference: March/April 2009

NICHQ Forum
The National Initiative for Children’s Healthcare Quality (NICHQ) is an action-oriented organization dedicated solely to improving the quality of health care provided to children. Founded in 1999, NICHQ’s mission is to eliminate the gap between what is and what can be in health care for all children.

Travel Grant: $500 (up to 3 - last approved in December/January 2008)
Next Conference: March 10-12, 2009

Pediatric Hospital Medicine Conference
The three leading organizations in Pediatric Hospital Medicine – AAP, Academic Pediatric Association, and the Society of Hospital Medicine – convene to discuss the latest in this growing field. The Section presents an opportunity for Residents to attend the Conference by offering $500 travel grants.

Travel Grant: $500
(up to 3 - last approved in May/June 2008)
Next Conference: July 23-26, 2009

Research past issues of Hospital Pediatrics
by visiting the news journal's
Keyword List
at
http://www.aap.org/sections/hospcare/Keyword%20Search.xlis
Section on Hospital Medicine Program  
Monday, October 13, 2008 · Boston, MA · AAP National Conference & Exhibition

Moderator  
Daniel Rauch MD, FAAP  
Education and Program Chairperson

8:00 am  
Joint Session (H3018) – Section on Hospital Medicine and Section on Critical Care: Hospice and Palliative Care for the Hospitalized Patient Caring for children with life-threatening illness: Can we do better?  
Joanne Wolfe, MD, FAAP  
Palliative Care in the PICU  
Lorry Frankel, MD, FAAP  
Overcoming Barriers to Palliative and Hospice Care  
Margaret Hood, MD, FAAP

10:00 am  
Poster Session and Presentation of the Pediatric Hospital Medicine Abstract Research Award

11:30 am  
Break

11:45 am  
Business Meeting and Lunch  
Laura Mirkinson, MD, FAAP, Chairperson

12:30 pm  
Community Hospital “Hospitalist” Programs  
Faculty: Scott Krugman, MD, FAAP; Ken Roberts, MD, FAAP; and Steve Narang, MD, FAAP

2:00 pm  
Break

2:15 pm  
Inpatient Quality Improvement  
Faculty: Mike Vossmeyer, MD, FAAP

3:45 pm  
Break

4:00 pm  
Primary Care for the Hospitalized Patient  
Faculty: Sarah McBride, MD, FAAP

5:30 pm  
Adjourn

POSTERS FOR VIEWING

• (718) Cost and Length of Stay for US Children Hospitalized for Respiratory Illness.  
• (1058) Pediatric Hospitalist Compensation and Productivity 2006-7.  
• (691) Follow-Up Echocardiogram Rate after Diagnosis of Kawasaki Disease.  
• (984) Risk of Apnea in Bronchiolitis: A Systematic Review.  
• (500) Applying of Inpatient Core Measures Before and After Implementation of a Bronchiolitis Care Path.  
• (562) Infantile Kawasaki Disease Refractory to Conventional Therapy: A Case for Infliximab.  
• (550) Putting in the Pediatric IV: Does Confidence and Competence Make a Difference?  
• (883) Newborn Circumcision by Hospitalists: A Three-Year Report on Complications and Referrals for Suspected Abnormalities.  
• (166) Improvement of Quality and Timeliness of Discharge Summaries.  
• (69) A Pediatric Hospitalist Elective: Training Hospitalist Leaders.  
• (431) Back Pain and Braces? 14 Year-Old with {Eikenella Corrodens} Discitis with Contiguous Vertebral Osteomyelitis.  
• (679) An Infant with {Salmonella} Meningitis and Concurrent {Influenza Type B} Infection.  
• (556) An Uncommon Case of Neonatal Cholestasis.  
• (311) Pediatric Mock Codes: Improving Resident Resuscitations.  
• (630) A Survey of Health Care Providers Regarding Family-Centered Rounding.  
• (794) Langerhans Cell Histiocytosis: An Unusual Mimic of Sexual Abuse.  
• (611) Contribution of a Hospitalist Lecture Series to the Medical Student Inpatient Experience.  
• (210) Family Centered Rounds: Measuring the Impact.  
• (322) Pulmonary Hypertension, a Presentation of Arnold Chiari Malformation Treated by Surgical Decompression.  
• (218) When Parents and Providers Disagree on a Child’s Treatment.  
• (603) PIC’M Study: Parental Influence in Clinical Management.  
• (103) Baclofen-Induced Psychosis.  
• (368) A Limitation of Computerized Records in Recognizing Critical Lab Values: An Infant with Neutropenia.