Warm Greetings SOID members! As I begin my role as your new chairperson, I would like to first thank Dr. Dennis Murray for his outstanding leadership and dedication as the outgoing Chair of the AAP’s SOID. Dr. Murray has solidified many of the elements of the section’s strategic plan, first introduced by Dr. Meg Fisher, of adding Infectious Diseases Fellows in Training to the SOID Executive Committee and the Education Subcommittee. He has been a supportive and vocal advocate for these fellows who have been integral members of these committees and their suggestions and ideas have been a valuable asset to the educational activities put forth by the section for all SOID members. Their input has been especially invaluable for creating interest among younger members of the AAP, particularly residents and medical students.

I would like to take this opportunity to thank several of our Infectious Diseases Fellows in Training for their valuable contributions and service to the SOID. Dr. Annabelle de St. Maurice is completing her term as a member of the SOID Executive Committee. During her tenure she has worked on updating the training fellow page of the SOID website, attended the Global Immunization Advocacy Day meeting sponsored by the AAP, and is working with Dr. Kathy Edwards on a Pedialink Vaccine Hesitancy module. Dr. Leena Bhattacharya-Mithal is completing her term as a member of the SOID Education Subcommittee. During her tenure, Leena wrote an article with Dr. Gordon Schutze on the uses of Doxycycline that was published in AAP News in May 2014. She has been working with me on the development of a Pedialink Challenging Cases module on Pertussis which will be available soon on the AAP Pedialink website. Both have had the opportunity to attend Committee on Infectious Diseases (COID) meetings and review various policy documents and education-related materials.
Three of the major goals of the SOID are: 1) to strengthen our relationship with the Pediatric Infectious Diseases Society (PIDS) in order to expand the educational and networking venues available to our membership. The SOID continues to work with PIDS on the PREP ID Board Review course and on other educational endeavors. 2) to work more closely with the AAP COID in some of their community outreach endeavors, and 3) to work with other AAP sections to develop joint educational programs for the AAP National Conference and Exhibition (NCE). This is becoming an increasingly important way to provide infectious diseases education on a variety of topics to a larger group of individuals.

One of the major items on which the SOID Executive Committee has been working is the creation of a SOID visiting professorship. This program has been designed to bring nationally and internationally known pediatric infectious diseases specialists to pediatric and family practice programs around the country that do not have or that have limited access to a pediatric ID specialist. The professorship would give these programs an educational opportunity to have the visiting professor address infectious diseases issues that the program may be dealing with and allows for ample interaction between the visiting professor and members of the program and community physicians in which the program is located. The launching of this program is very exciting and will provide our members with a unique educational opportunity. In memory and honor of Dr. Michael Marcy’s selfless and unwavering dedication and enormous contributions to the educational endeavors of the SOID, the SOID visiting professorship will be named after Mike. Watch for more information about this program in the coming months.

As you all are aware, the number of measles cases in 2015 has now grown to over 175 as of March 2015. The majority of the cases stem from the Disneyland outbreak. However, there are 3 other outbreaks that have contributed to the number of cases seen to date. This outbreak has resulted in a number of states around the country re-evaluating the “religious” and “philosophical” vaccine exemptions that are currently in place. These states are working to either eliminate or toughen the methods by which these types of exemptions can be obtained by parents who refuse to vaccinate their children. There have been vocal protests against the removal of these types of exemptions by anti-vaccine groups, parents who refuse to vaccinate their children, and the chiropractic community. Many members of the AAP SOID have been in the media (e.g. radio, television, newspaper, magazines) in their various states speaking about the continued need to ensure that infants and children are receiving their vaccines on time and are up to date on their vaccines in order to prevent the transmission and spread of measles and other diseases. In response to questions that have been generated by practicing pediatricians, the AAP COID has modified the 2015 Red Book Chapter on measles and has released it early in order to help the members of the AAP address the issues of measles in their patients. See page 14 in the newsletter for information about this and other measles resources that are available. AAP Chapters are an important voice in this discussion and the New Jersey Chapter responded by developing a webinar for its members. We welcome hearing about and sharing other Chapter initiatives that address infectious disease-related issues.

Finally, whether you are a general pediatrician with a specific interest in infectious diseases or a pediatric infectious diseases sub-specialist, I encourage you to take advantage of the many educational opportunities in which the SOID is involved. Whether it is specific ID programs (search ID for topic) at the 2015 NCE in Washington, DC, attendance at the PREP ID Board Review Course (2015 in Chicago), or through the AAP SOID Website with new Pedialink courses, the SOID is focused on the education of our members. New programs are in the works, so please stay tuned, especially as we roll out our visiting professors program. I would also like to encourage members who are interested in serving the SOID on educational issues or who have suggestions for educational topics, website issues or the newsletter to please contact us or complete the 8-question expertise and interest survey.

I very much look forward to receiving your ideas and suggestions as we go forth and thank you for your continuing interest and membership in the SOID. Please don't hesitate to contact Suzanne Kirkwood, the SOID manager and staff liaison at the AAP (Skirkwood@aap.org) or myself (ttan@northwestern.edu) to let us know how we can best serve your needs. Enjoy the warmer weather and best wishes for a wonderful spring and summer.

Tina Q. Tan, M.D., FAAP, FPIDS, FIDSA
In Memoriam: S. Michael Marcy, MD, FAAP

Reflection by Ken Zangwill, Chief, Division of Pediatric Infectious Diseases, Harbor-UCLA Medical Center, Professor of Pediatrics, Geffen School of Medicine at UCLA

The Section on Infectious Diseases would like to acknowledge the life and contributions of S. Michael Marcy, MD, a member of our Section who died in September 2014. Since his passing, many individuals and institutions in pediatrics have celebrated Mike's accomplishments and dedication to his patients and our specialty. These tributes reflected his strong work ethic, endless enthusiasm for teaching and research, collegiality, and his well-earned position as a role model for many.

Mike was extremely active in pediatric infectious disease policy and education initiatives for decades, at every level. In addition to his work for the SOID, Mike was a valued member of the ACIP, AAP COID, and innumerable other committees and policy/practice groups at PIDS, AAP, CDC, AHRQ, and NCQA. Indeed, he could be counted on to give “100%” whether the task was high profile or thankless. For the SOID specifically, Mike was a member of the Executive Committee for 6 years and Co-Chair of the AAP PREP-ID Planning Group for 4 years. Mike was dedicated to the faculty whom he recruited to PREP-ID; let it be known that he picked up the tab for libations for several pre-conference faculty dinner gatherings (AAP does not reimburse such intemperance!). For SOID and other groups, he led many sessions at infectious disease meetings, frequently spoke at hospitals throughout the country, and was known for his animated, informative, and truly practical talks. In 2012, Mike received the SOID Award for Lifetime Contribution in Infectious Diseases Education, an honor which particularly moved him. Recently, the SOID Executive Committee has named its newly developed Visiting Professor Program after Mike as he clearly personified the raison d’etre for this activity.

Many SOID members have shared in the “Marcy experience” which reflected his easy manner, scientific rigor, enjoyment of public service, and perhaps most importantly to him, modeling of the highest clinical standards in patient care. Regardless of context, Mike's joie de vivre could not be ignored. Mike was overtly humble and consistently gave due credit to others as the source of a clinical pearl. He could take and deliver a searing joke, but never failed to make a phone call on someone's behalf (sometimes telling the beneficiary, sometimes not). Mike Marcy - clinician, educator, researcher, raconteur, gastronome, lover of art and art history, friend, and all around mensch - lives on in the heart of the SOID.

Training Fellow’s Column

Seeking a Job in Pediatric Infectious Diseases

Annabelle de St. Maurice, MD, FAAP

Pediatric infectious diseases doctors have high job satisfaction and enjoy careers rich with educational, clinical and research opportunities. Leaving fellowship and seeking employment can be a daunting task, particularly given the current challenges in reimbursements and NIH funding. To gain insight into the job seeking process, we contacted several recent fellowship graduates to get their advice.

Utilize online job and organizational websites

One of the most consistent recommendations was that job seekers “look everywhere and talk to everyone.” Although the PIDS website is frequently used for job searches, other organizations and websites advertising jobs include: IDSA website, PedsJobs, CareerMD, LinkedIn, Doximity and even Google. There are also less traditional job opportunities for pediatric infectious diseases physicians in the government, private sector and non-governmental organizations such as PATH or the WHO. Pediatric infectious diseases physicians pursue careers in the pharmaceutical industry and with U.S. Government agencies (e.g., CDC, FDA, and NIH) and other organizations (e.g., Doctors without Borders, the Gates Foundation).

Continued on Page 4
Network early and often
It is never too early to make connections with colleagues at other institutions. Networking at conferences such as IDWeek, St. Jude/PIDS and PAS is key. It is important to be proactive at conferences. Consider arranging meetings during the conference. Email faculty prior to conferences to schedule a time to meet, such as over a coffee break. Ask faculty at your home institution to contact outside faculty to personalize your application. Having a contact at another institution can help you to stand out as an applicant. Even if an institution does not have a job posting, you may still benefit from sending your CV and cover letter.

Hone your career goals
The job seeking process is an active process. Prior to beginning the job search, know your career goals. Be firm about what you are looking for in a job to help you achieve those goals. Write a mission statement for yourself that describes what your ideal career would look like, including what you want to be doing in five years. Make a list of your strengths and skills. Once you identify a potential job, know what the division or organization is looking for, and specify ways that your interests and skills can augment the division.

Take advantage of the expertise within your institution
After you identify your career goals and potential jobs, talk with faculty at your home institution. They are an invaluable source of advice, and many have the “inside scoop” on outside divisions. Discuss appropriate and inappropriate questions to ask while interviewing. Offer to assist them in writing drafts of your letters of recommendation.

Be flexible
A final word of advice is to be flexible in your job search. Don’t rule an institution out until after you visit and interview. In addition, you may need to be flexible about your job description. Some infectious disease jobs include a research and clinical component. However, if you do not have grant funding to support your salary, you may have other responsibilities. These may include: infection control, antibiotic stewardship, or educational components. If these are not your primary focus, think about how they can complement your goals. Some pediatric infectious disease trained physicians also attend in general pediatrics clinics and on the general inpatient service to support their salary.

The job finding process can be intimidating, but many diverse careers and highly rewarding career opportunities exist for pediatric infectious diseases trained physicians. Talk with other fellows and faculty to get more advice about the process. If you have other job seeking tips, resources or websites that you feel would be beneficial to share, please feel free to email me. Good luck!

Annabelle de St. Maurice, MD, FAAP (A.dest.maurice@vanderbilt.edu - through June, 2015) and Rana Hamdy, MD, MPH, FAAP (hamdyr@email.chop.edu) currently serve as the SOID Training Fellow Liaisons on the SOID Executive Committee. Feel free to contact them with any questions or topics for future articles.

---

**SOID Travel Grants to the 2015 NCE**

The Section is pleased to offer NCE travel grants for the 2015 NCE to residents with an interest in infectious diseases or ID fellows in training who are AAP/SOID members. Complete the application and submit it by May 8, 2015 to lrutt@aap.org.
When: August 17-22, 2015

Where: Swissôtel Chicago, Illinois

What:
1. PREP®:ID is designed to provide infectious disease specialists with a comprehensive review and update of pediatric infectious diseases, based on the Subspecialty Certifying Examination content outline developed by the Sub-board of Pediatric Infectious Diseases.

2. For general pediatricians, family physicians, nurse practitioners, physician assistants, and other health professionals, the course is designed to enable participants to apply infectious disease updates and case presentations readily in their own practice settings.

3. Choose the sessions and formats that meet your needs! Although originally designed to meet the schedules of general pediatricians and other healthcare professionals in practice, registration in the Infectious Diseases in Clinical Practice track is open to everyone. Subspecialists whose schedules are best accommodated by the Morning and Weekend Courses are welcome to register for the Infectious Diseases in Clinical Practice track and still attend all plenary lectures, question-and-answer sessions, and case vignettes offered during those times. All attendees are free to select either the plenary lectures or the case-based presentations throughout the course.

New for 2015! The Self-Assessment portion of this course is approved through the AAP MOC Portfolio Program for 10 points by the American Board of Pediatrics for MOC Part 2.

To view the course schedule and brochure, visit www.aap.org/livecme. AAP Section on Infectious Diseases Members reduced registration rate is not available online. Section Members may register by phone at 866/THE-AAP1 (866/843-2271).

Sponsored by the American Academy of Pediatrics (AAP), the AAP Section on Infectious Diseases, and the Pediatric Infectious Diseases Society (PIDS)

The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The AAP designates this live activity for a maximum of 40.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Pediatric infectious disease physicians are often asked to evaluate children, typically children <5 years of age, with a history of recurrent infections. One of the primary objectives of assessing young children with recurrent infections is to evaluate the child for some form of immunodeficiency.

The term “recurrent infections” is meant to be used to refer to those infections that: are numerous; are too severe; last longer than anticipated; are associated with unusual complications or involve unusual organisms; and/or do not resolve with usually effective anti-infective agents.

The vast majority of children who present with a history of “recurrent infections”, especially those children whose infections involve a single organ system (esp. respiratory), have an increased exposure to infectious agents, such as occurs in child care; have allergy-related issues; or have some form of chronic disease (e.g. cystic fibrosis; gastroesophageal reflux (GERD)).

Some important factors to consider, when evaluating children with recurrent infections and when looking for features suggestive of an immunodeficiency, are:

a. Is there a family history of immunodeficiency, early childhood death(s) or fetal loss? Did the mother have an HIV test during pregnancy?

b. Is there a history of consanguinity in the immediate family or grandparents?

c. Was there delayed umbilical cord detachment (>4 weeks)?

d. Is the child otherwise growing normally; any evidence for failure to thrive?

e. Has the child had serious complications from receiving live-virus immunizations (e.g., MMR or Varicella vaccine)?

f. Has the child had chronic diarrhea?

g. Has the child had > 2 episodes of bacterial meningitis and/or bacterial or fungal sepsis?

h. Does the history or previous lab evidence support infections with opportunistic organisms (e.g. Nocardia, Burkholderia)?

In this author’s opinion, the history in these cases is the most critical part of the story. Knowing at what age infections began, whether or not there were any positive cultures/studies, and the child’s response to appropriate antibiotic therapy are important clues. Having vaccine preventable diseases despite age-appropriate immunizations may be a red flag. Always ask about medications for other conditions because some agents can have unintended consequences affecting the immune system. A history of autoimmune disorders or unusual malignancy in the family could be related and can lead to discovery of certain types of primary immunodeficiency. Don’t forget social history: travel, various types of out of home child care (including Mom’s Day Out and prolonged stays in church nursery), exposure to second hand smoke, etc. Consultants should inquire about the health and ages of any siblings.

While this author has found identifying major abnormalities on physical examination uncommon, it is important to assess:

a. Overall appearance, growth, development and level of activity

b. Any rashes?

c. Presence (or, in particular, absence) of lymph nodes. Are there any enlarged (>1 cm) or abnormally hard or matted nodes?

d. Presence of hepatosplenomegaly?

e. Are the child’s teeth and, in particular, the gums healthy-appearing?

f. Heart murmur, wheezing, joint tenderness, etc.
In terms of diagnostic evaluation, much is dependent upon the history and examination findings. Most cases deserve a CBC with differential, metabolic panel/profile, and (if not done previously) a U/A. Children with poor to fair growth and chronic cough need a CXR and, because the newborn CF screen does not detect all cases of cystic fibrosis, a sweat test. Focusing specifically on immunodeficiency, Ig A, G, and M levels, adding IgE with a history of recurrent staphylococcal infections (and/or history of wheezing, signs of allergic disease, etc.) are a start. This author also routinely checks IgG and IgM function by obtaining diphtheria or tetanus antibody titers and isohemagglutinins. For children with severe S. aureus infections, organisms like Serratia recovered from lymph nodes or lungs, or those who experience unusual infections (e.g., with Aspergillus or Burkholderia), obtaining a phagocytic oxidative response assay (such as DHR) is useful. Finally, testing for HIV, obtaining a CH50 (invasive S. pneumoniae infections) and a lymphocyte subset analysis by flow cytometry may also prove useful.

It is helpful to keep in mind that primary immunodeficiencies occur with an overall incidence of 1:10,000 births, and that roughly 65% are some type of antibody (B-cell) deficiency. Phagocytic deficiencies account for 10% and complement deficiencies for 5% of cases. Many states have added testing for severe combined immunodeficiency (SCID) to the newborn screen. However, this newborn screen does not detect all forms of combined B-cell and T-cell immunodeficiency which made up 15% of primary immunodeficiencies in the past.

Finally, in terms of management, during the evaluation process, you want to recognize and treat any infections and avoid giving live viral vaccines to the child until a sufficient work up has been done to ensure that the vaccines can be handled safely by the child's immune system. Use only irradiated, leukocyte poor/virus free blood products if transfusion is necessary and, depending upon the scenario, prophylactic antibiotics may be necessary. Once the evaluation is complete, those children with an underlying condition, anatomic abnormality, or recognized immunodeficiency (primary or secondary) should have specific management based upon the condition identified.

**Chapter Corner:**

**New Jersey Chapter Develops Measles Webinar**

In response the measles outbreak in the U.S., the AAP New Jersey Chapter developed a webinar that was offered to health care professionals twice in February, 2015 by Dr. Meg Fisher, Medical Director at the Unterberg Children's Hospital at Monmouth Medical Center.

Information regarding the clinical illness, complications, diagnosis, treatment, prevention and infection control of measles was presented. The 40 minute webinar was viewed by over 300 physicians and nurses. The measles webinar is archived at AAPNJ.org and is available free of charge to AAP New Jersey Chapter members and is $15 for nonmembers.

- Under the Membership tab, go to Member Login (non-members must register as a visitor).
- In the left-side menu, go to Upcoming Events. The measles webinar is on the list. Use the Register button to view it.
Partnering with an Immunization Registry Gives Added Value to Patients, Practices and Public Health

Kenneth Bromberg, MD FAAP FIDSA, Professor of Clinical Pediatrics, Mount Sinai School of Medicine, Chairman of Pediatrics, The Brooklyn Hospital Center, Attending in Pediatric Infectious Disease

The administration of vaccines to patients is an important function performed in pediatric practice. However, keeping track of those immunizations at a patient level, a practice level and a community level is not an easy task. Using New York City's mandatory City Immunization Registry (CIR) as an example, I will show how working with an Immunization Information System (IIS) can help to meet the needs of individual patients, pediatric practices and public health. I hope that others interested in pediatric immunization will collaborate or continue to collaborate with their local IIS/Department of Health (DOH) and perhaps duplicate some of the NYC activities. View detailed information about the US IIS and a description of the NYC CIR project.

The NYCDOH and Mental Hygiene's Bureau of Immunization holds quarterly meetings with the NYC Coalition for Childhood Immunization Initiatives (the Coalition), a group made up of stake-holders including community health centers, insurance companies, local pediatricians, other childhood vaccine providers, and the AAP District 2 Chapter 2 Immunization Representative. After the larger meeting, a small self-selected group (formed during early QI activities) called the Design Team, meets to discuss and advise the NYCDOH about immunization matters and specific issues with the IIS.

The larger meeting includes several presentations about vaccine issues presented by NYCDOH members, outside experts, or other interested parties. At these meetings, local providers are cited for meeting immunization goals using data from the CIR. These members are also sent letters of congratulation from the AAP, and invitations to join the AAP if they are not already members. Representatives from industry provide updates on vaccine availability and other feedback from their field staff.

Presentation topics have included local influenza immunization rates, experiences with school-based immunization clinics, measles outbreaks, ACIP recommendations, texting as a tool for capturing vaccine side effects and sending reminders, presentation of abstracts from national meetings and approaches to vaccine hesitancy.

As the CIR has matured, it has been accepted as an accurate source for vaccine information. As such, it is being used to fulfill the needs of patients, practices, and public health.

Patients:

Since the CIR is loaded with birth certificate data, just about everyone born in NYC is there when someone queries it. In addition, the CIR has facilitated two-way interface so those with compliant EMRs can communicate in real time. With the two-way interface, it is possible to manage the patient's vaccine status from data that exist in either the EMR or the CIR, eventually merging both. This is especially useful when a patient has been to multiple providers, avoiding the need to input information from multiple immunization cards or computer print-outs. The local EMR probably has vaccine logic but so does the CIR. When a practice reviews its rates with line-listing data in the CIR, it is an opportunity to see if the vaccine predictions differ by looking at discrepancies between up-to-date patients in both systems. This problem, which might eventually be solved by a common vaccine logic engine attached to all EMRs, is discussed in the CDC link.

In the case of influenza immunization, the DOH usually sends out quarterly reports on up-to-date status derived from the CIR. However, working with the AAP, the CIR has created a special report that can be run in the registry using the same patient cohort for the entire flu season. Providers can run this report ad hoc in between the quarterly reports. In addition, the coalition and the AAP recruited industry to educate providers on this functionality when the vaccine salesforce visits an office. The NYCDOH in combination with the AAP ran several webinars to train providers in the use of the registry-based influenza reports.

Continued on Page 9
Partnering with an Immunization Registry …  *Continued from Page 8*

**Practices:**
The CIR has developed logic to identify patients who are associated with a practice. Those cohorts serve as the denominator for up-to-date calculations. If the practice is not satisfied with the determined rates, an ongoing clean-up (including the ability to remove patients who have moved or gone elsewhere) will eventually lead to data that both parties accept. Once those data sets are “cleaned” it is possible for a pediatric practice to use the CIR to receive MOC credit via the AAP Education in Quality Improvement for Pediatric Practices (EQIPP) program based on these data. The local AAP vaccine liaison is available to help practices navigate EQIPP. In addition, the CIR is an accurate source for vaccine information, providing better data for meeting HEDIS measures than those obtained by insurance companies through administrative claims data. These better data can be invaluable to practices that are being incentivized to improve up-to-date rates but find the information did not get to the insurance company.

All VFC vaccine ordering is done in the CIR. The CIR can print health forms, and create recall lists and letters. Soon it will be able to text reminder-recall messages. The addition of these functions is the result of provider feedback and will be rolled out with the support of AAP communication channels.

**Public Health:**
This AAP/NYCDOH relationship results in better data for everyone, the ability to act on those data to improve public health, and advantages to practices, such as facilitation of HEDIS data, MOC credit, and improved immunization rates. This works best with the two-way interface, and it is likely that meaningful use will force all EMRs to talk to a registry before too long.

As members of the AAP section on infectious diseases, you may already be involved with your local IIS. However, please free to adopt any of these ideas for your own purposes. The AAP ([immunize@aap.org](mailto:immunize@aap.org)) and I ([KEB9016@nyp.org](mailto:KEB9016@nyp.org)) would welcome feedback regarding your immunization registry/IIS success stories.

**Resources:**
- American Immunization Registry Association. [Immunization Registry Functional Standards Resources](https://www.aap.org/aap.proxy/immunization-registry-functional-standards-resources/).
- [Chapter Initiatives page](https://www.aap.org/aap.proxy/immunization-information-systems-chapter-initatives/) for immunizations through the AAP. They often include information about the state IIS.
- AAP – [What are Immunization Information Systems?](https://www.aap.org/aap.proxy/what-are-immunization-information-systems/)
- [AAP Immunization Training Guide](https://www.aap.org/aap.proxy/aap-immunization-training-guide/)

---

**ID Sessions at Pediatric Academic Societies Meeting**

**April 25 – 28, 2015, San Diego, California**

For the descriptions of the ID sessions go to: [http://www.pas-meeting.org/tracks/tracks_ids.asp](http://www.pas-meeting.org/tracks/tracks_ids.asp)

For the complete PAS program go to: [http://www.pas-meeting.org/files/Prelimprogram.pdf](http://www.pas-meeting.org/files/Prelimprogram.pdf)
Review of the Recent Infectious Disease Literature

These summaries and commentaries are completed by volunteer Contributing Editors from the SOID. Each is responsible for reviewing the current infectious disease literature for several journals. They select an interesting article and present it for your review to keep you current on various issues.


Reviewed by: Jane Gould, MD, FAAP, Associate Professor of Pediatrics, Drexel University College of Medicine, Hospital Epidemiologist, Attending Physician, Section of Infectious Diseases, St. Christopher’s Hospital for Children, Philadelphia, PA

This study, an active laboratory and population based surveillance for *Clostridium difficile* infection (CDI) occurring in hospitalized and non-hospitalized children from Monroe County, New York, demonstrates the increasing incidence of CDI in children, both in inpatient and outpatient settings over a 2 year study period. The study excluded infants to avoid the issue of colonization in this age group and only included testing of unformed stools. Testing was performed using a combination of toxin testing and PCR. All positive tests were reported to the county health department. 64% had additional stool studies performed to identify other pathogens, but the majority of patients were not tested for rotavirus and norovirus. The investigators classified cases as community-associated (CA) if the stool was collected as an outpatient or ≤3 days after hospital admission and the patient had no overnight healthcare facility stay in the prior 12 weeks. If these conditions were not met, the CDI was classified as healthcare-associated (HA). The authors also collected information from both inpatient and outpatient medical records including exposure to antibiotics for the 12 weeks before the CDI diagnosis. During the 2 year study period there was an increase in the use of PCR detection in the laboratories conducting *C. difficile* testing (2011; 43% vs 2011; 52%) which may have increased the detection rate. Additionally, a random sampling of specimens were cultured by the New York State Public Health Laboratory and sent to the Centers for Disease Control and Prevention for molecular typing by pulse field gel electrophoresis (PFGE) to determine strain type. The pediatric CDI incidence rate was 33.8 and 45.8 per 100,000 in 2010 and 2011, respectively. The rate increased in all age groups with highest incidence found in cases aged 1-2 years. The majority of cases were CA (71%). Twenty six percent of cases were recurrent CDI. Most cases had underlying medical conditions, with many having multiple co-morbidities requiring medical devices such as feeding tubes. CA cases were less likely to have an underlying condition than HA cases. The NAP1 strain, a hypertoxin-producing strain that has been shown to be more virulent in adults, was identified in 27% (32% CA vs 10% HA). Exposure to antibiotics was more common in HA than CA cases, but antibiotic exposure was unknown in 12% of CA cases. The most common indication for antibiotics was “URI or ear infections”.

Reviewer's Commentary:
These findings corroborate previous U.S. studies that have shown an increase in CDI incidence rates in children as well as an increase in the proportion of CDI cases classified as CA. As the delivery of more specialized, sophisticated medical care shifts to outpatient settings, such as infusion, dialysis and ambulatory surgical care centers, the rate of CA-CDI is likely to continue to increase. Pediatricians should be aware that even children without traditional risk factors can develop CA-CDI. Strategies to prevent CDI in the pediatric population should focus on outpatient healthcare delivery sites to promote infection prevention and judicious use of antibiotics.


Reviewed by: Sherman J. Alter, MD, Professor of Pediatrics, Wright State University Boonshoft School of Medicine; Division of Infectious Diseases, Dayton Children’s Hospital, Dayton, OH.

The mosquito-borne flaviviral illness, dengue, infects an estimated 390 million persons each year. While death rates are low, infection results in considerable morbidity and consumes significant global economic resources. The urban-adapted mosquito *Aedes aegypti* and the secondary vector *A. albopictus* are widely spread across tropical and subtropical latitudes.

Continued on Page 11
The vector has spread to some temperate areas of the world, including the United States. Infection with one of four viral serotypes (1-4) results in disease ranging from asymptomatic infection to febrile disease to severe illness presenting with vascular leak, hemorrhage, and risk of death.

A trial of a recombinant, live, attenuated, tetravalent dengue vaccine (CYD-TDV) was carried out in five Latin American countries. 20,869 children between the ages of 9 and 16 years received either CYD-TDV or placebo at months 0, 6, and 12 under blinded conditions. Children were followed for 25 months. The primary outcome was vaccine efficacy against symptomatic, virologically confirmed dengue (VCD), regardless of serotype or disease severity, occurring more than 28 days after the third injection. Among an immunogenicity subgroup of 1944 children, 79.4% were seropositive for one to four dengue serotypes at baseline.

In the per-protocol group, there were 176 VCD cases (with 11,793 person-years at risk) in the vaccine group and 221 cases (with 5,809 person-years at risk) among controls, for a vaccine efficacy (VE) of 60.8% (95% CI, 52.0 to 68.0). VE among an intention-to-treat group (receipt of at least one injection) was 64.7%. Serotype-specific VE varied: serotype 1- 50.3%, serotype 2 - 42.3%, serotype 3 - 74.0%, serotype 4 - 77.7%. VE was highest among children having pre-existing dengue antibodies at baseline (83.7%) when compared to those who did not (43.2%). VE against severe disease was 95.5% and against hospitalization was 80.3%. The safety profile of CYD-DTV was similar to that for placebo.

Reviewer’s Commentary:
This study is the second phase 3 efficacy trial of this dengue vaccine. The first was performed among Asian children and had a per-protocol VE of 56.5% with a similar trend in serotype-specific VE. In both studies, the populations were highly immune at baseline to at least one of the serotypes. There were no safety signals identified in the studies. The present study demonstrated both higher efficacy and seroconversion rates in vaccinees with seropositive status than in seronegative subjects. There was a disparity in VE among differing dengue serotypes, as well. The reasons for these findings are not fully known. Of some concern, a secondary infection (i.e., two sequential infections by differing dengue serotypes) is a known risk factor for severe disease. However, there were no increased adverse events by vaccinating seropositive or seronegative children living in a dengue-endemic area with a live dengue vaccine. This vaccine was safe and was effective against VCD, severe VCD, and led to fewer hospitalizations.

References:


Reviewed by: Stephen C. Aronoff, MD FAAP, Temple University School of Medicine

The authors reviewed the world’s literature on vaccine adverse events from 2010 to the present. The goal was to expand the 2011 IOM report of vaccine safety. Included studies demonstrated active surveillance for adverse events and included a controlling mechanism for comparison (controlled trials, observational studies with vaccinated and non-vaccinated...
Review of the Recent Infectious Disease Literature Continued from Page 11

subjects, case control studies or observational studies that used regression to adjust for confounders). Studies that addressed vaccines no longer or never recommended for routine use in the US were excluded. The narrative used the AHRQ strength of evidence assessment\(^1\). Building upon the 2011 IOM findings, the authors uncovered 67 additional references.

Their findings are summarized in the following table:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Associated Adverse Event</th>
<th>Quantitative Measure</th>
<th>Strength of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IRR 23.14 (3.59-149.30)</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>purpura (7-17 yo)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>food allergy</td>
<td></td>
<td>Insufficient</td>
</tr>
<tr>
<td></td>
<td>autism</td>
<td></td>
<td>Insufficient</td>
</tr>
<tr>
<td>IPV</td>
<td>food allergy</td>
<td></td>
<td>Insufficient</td>
</tr>
<tr>
<td>Influenza</td>
<td>febrile seizures</td>
<td>44.9 vs 12.5 per 100,000</td>
<td>Moderate when co administered with PCV</td>
</tr>
<tr>
<td></td>
<td>vomiting/diarrhea</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>MMR</td>
<td>febrile seizures</td>
<td>OR 1.10 (.64-1.90)</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Not associated with autism</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>thrombocytopenic purpura</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>MCV</td>
<td>anaphylaxis to components</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>headache, irritability or urticaria</td>
<td></td>
<td>Insufficient</td>
</tr>
<tr>
<td>PCV13</td>
<td>febrile seizures</td>
<td></td>
<td>Moderate. High when coadministered with influenza</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>intussusception</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>Varicella</td>
<td>vaccine strain dissemination</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>purpura (11-17 yo)</td>
<td>IRR 12.14(1.10-133.96)</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

IRR = Incidence rate ratio
Febrile seizures associated with influenza vaccine were low (12.5/100,000) but increased almost 4-fold when the vaccine was co-administered with pneumococcal vaccine. No evidence was found to associate autism with MMR vaccination.

**Reviewer’s Commentary:**
The recent measles outbreak has opened a wide, national discussion on childhood vaccinations and vaccination policy. At the present time only two states, Mississippi and West Virginia, accept only medical exclusions for childhood vaccinations. This article provides empirical evidence that while vaccines have recognized adverse effects, the frequency, nature and severity of these events is far outweighed by the benefits children enjoy through vaccination.

Policy Highlights from the Committee on Infectious Diseases (COID)

Policy Topics under Consideration:
1. (Revise) The Use of Systemic and Topical Fluoroquinolones in Children
2. Antimicrobial Stewardship in Hospitals

AAP statements under development
1. Updated Meningococcal Vaccine Recommendations
2. Infection Prevention and Control in Pediatric Ambulatory Setting
3. Vaccine Hesitancy
4. Adolescent Immunizations
5. Diagnosis, Treatment, and Prevention of Congenital Toxoplasmosis in the U.S.
6. Infection Control in Organized Sports
7. Biologic Response Modifiers

Statements in Revision
1. Chemical-Biological Terrorism and Its Impact on Children
2. Acute Otitis Media and Meningitis in Children with Cochlear Implants
3. Non-Therapeutic use of Antibiotics in Animal Agriculture: Implications for Pediatrics
4. Head Lice
5. Annual Influenza Statement
6. Mandatory Influenza for Healthcare Workers

The following AAP clinical practice guidelines are in the process of development:
1. Fever in Infants Under 3 Months of Age

Guidelines in Progress with External Organizations
1. HICPAC is working on a guideline for prevention of infections among patients in neonatal intensive care units (NICU)
2. Kawasaki Disease and Endocarditis with Committee on Cardiovascular Disease in the Young (AHA)
3. Diagnosis and Management of Bone and Joint Infections (IDSA/PIDS)
4. Clinical Guidelines for Diagnosis and Antiviral Management of Seasonal and Pandemic Influenza in Adults and Children (IDSA)
5. Inappropriate Antibiotic Use for Acute Respiratory Tract Infections (AHRQ)

From the ACIP Meetings of October, 2014 and February, 2015

The slide sets and the minutes for the meeting of October 29-30, 2014 are available to view.

The slide sets for the meeting of February 26, 2015 have been posted and the minutes of the February meeting will be available on the website soon.
In Case You Missed These…

1. Alternatives to Consider During Cefotaxime Shortage
   A shortage of intravenous cefotaxime sodium is being reported by the Food and Drug Administration (FDA), as one of the current manufacturers has discontinued production of the cephalosporin antibiotic. Read about alternatives to consider during the shortage in the AAP News article.

2. Update to Early Release of 2015 Red Book Chapter—Measles
   Since the chapter was first released on February 9, additional information was added on February 20 to clarify the use of Vitamin A and MMR vaccination during an outbreak. Please see the full AAP News article for additional information and resources. Get more information about the recent measles outbreak, from the CDC Health Advisory Alert or the AAP press release, urging parents to make sure their children are vaccinated with MMR vaccine to protect them from measles. An archived webinar regarding clinical guidance and vaccine recommendations sponsored by the CDC is now available.

   The American Academy of Pediatrics has published an online “early release” Red Book chapter titled “Hemorrhagic Fevers Caused by Filoviruses: Ebola and Marburg” for use by pediatric health professionals. This chapter is now available on Red Book Online and will be included in the upcoming 30th edition of the Red Book that will be published in 2015.

   These recommendations update the current edition of Red Book and the chapter represents policy of the American Academy of Pediatrics. Please see the recent AAP News article for more information about the latest recommendations. For a collection of resources, links and an archived audio call, from the AAP and CDC on Ebola, please go to the Ebola Outbreak page on www.aap.org

Welcome to our New SOID Members

If you know of others who might be interested in joining the Academy and the Section, please have them call 1-800-433-9016 ext 5885 or go to www.aap.org. The “Become A Member” link will take them to an application. Current Academy members may join the Section by accessing the online application (member ID and login required).
Given this past truly horrible winter for most of the country, let's look forward to a summer issue that we may face.

Three siblings, 14 months, 29 months, and four years of age, present with diarrhea for four days with cramping and abdominal discomfort. There is no fever but appetites are decreased. The younger children are irritable and seem bloated. There has been no unusual food, travel or animal exposure. There is no visible blood in stools nor has stool been dark or tarry. Physical examinations are within normal limits except for perianal diaper dermatitis in the 14-month-old and resolving sunburn from a family day at their gated-community pool. Mother is having 4-5 loose stools per day too. You suspect a common exposure at the pool and order stool testing.

At lunch, colleagues report other similar cases implicating the same pool. Later the EIA assay is positive for *Cryptosporidium spp.* and *Giardia intestinalis* antigen in stool of all three children. The gated-community association texted homeowners that the baby pool water tests revealed 250 coliforms, 200 fecal coliforms and 50 *E. coli*/100mL.

How do these parasites spread in a nominally chlorinated pool that is routinely checked for chlorine content? Since 2000, recreational water illness outbreaks from swimming appear to be increasing. From 2004 to 2008, there was a 200% increase in *Cryptosporidium* cases (3,411 in 2004 and 10,500 cases in 2008). (1) Of concern, 12% of public pool inspections led to pool closings for problems such as low chlorine levels. (2)

People get infected in a 3-step process. First parasites are released in the pool. Then the parasites must survive and not be inactivated by the chlorine. Then there needs to be ingestion/inhalation of infectious materials providing access to the gastrointestinal tract.

1. **Parasites in the baby pool.**
   Most public and managed private pools have policies that exclude persons with diarrhea from swimming. Not all families comply and sometimes it can be difficult to know whether children are early in a diarrheal episode. Diapered infants are often the source, having acquired parasites in day care or simply from exposure to contaminated water or other infectious material from other individuals. Older children or adults may also fail to completely remove residual material after defecation (CDC estimates 0.14 grams of fecal material in an average perianal area). But when one considers a baby pool as the source, it is most likely diapered infants. Disposable diapers do not retain *Cryptosporidium* or *Giardia* cysts if the diaper child is placed in the pool. (3) It is not uncommon that a child's diaper contains stool, and diluted effluent containing infectious material escapes into the pool.

2. **Chlorine loss**
   Most managed pools are checked at least twice a day to maintain satisfactory chlorine levels. However levels can vary toward the end of each cycle and chlorine activity decays in the presence of ultraviolet light. This means that shallow pools will have a higher proportion of the chlorine inactivated because the UV rays reach a higher proportion of the total water content of the pool. Of note, urine consumes active chlorine. This has led some pool managers to check baby pool chlorine levels more frequently.

3. **Lesser Chlorine Effect**
   *Cryptosporidium* is relatively insensitive to chlorine and its size is below the threshold for some filtration systems. Many remember the Milwaukee *Cryptosporidium* outbreak a number of years ago despite apparently reasonable filtration and chlorine treatment at the city water plant. This outbreak raised awareness of the difficulty of eliminating *Cryptosporidium* from treated water and led to changes in some systems to provide higher chlorine contents, periodic hyperchlorination or tighter filtration adding either ozone or UV treatments. Despite this, a proportion of city water supplies will have periodic detections of *Cryptosporidium* and/or *Giardia*.

Continued on Page 16
While these parasites are found in recreational water or swimming pool filter backwash during outbreaks (3-6), they also can be found in the absence of outbreaks. Recently, the CDC sampled 160 pools not associated with outbreaks in Atlanta and found that 58% had evidence of stool contamination, and, more specifically, one or both parasites were detected in 13 (8.1%) pools; 10 (6.2%) with *Giardia* spp., 2 (1.2%) with *Cryptosporidium* spp., and 1 (0.6%) with both. (7)

4. So now there are viable *Giardia* cysts or *Cryptosporidium* in the baby pool that chlorine has not inactivated. The next step is ingestion/inhalation of contaminated water. Anyone who has spent any time at swimming pools with small children and infants recognizes that inevitably some water tends to be swallowed during play or even accidental head immersions. Ingestion can also occur from water aerosolization via sprays or fountains. Once ingested, the parasites find their natural niche and replicate, leading to the gastroenteritis found in the children and mother noted above.

As clinicians, what do we know of these two parasites?

Cryptosporidiosis (Figure 1) is one of the most frequent waterborne disease illnesses, (~800,000 cases annually in the U.S.). (8) *Cryptosporidium* is a fecal-oral acquired protozoa, but “fecal-oral” can take several forms. These include foodborne, waterborne (city-water, stream or pond water, recreational water), animal-to-person or even person-to-person transmission (e.g., daycare). The onset of symptoms heralds oocysts (infectious stage) in the stool. Cysts are present in stools for 2-3 weeks after resolution of symptoms. They are infectious immediately after excretion (unlike, for example, *Toxoplasma* in cat feces that can take 3 days to become infectious) and, if kept moist, remain infectious for up to 6 months. *Cryptosporidium* oocysts are chlorine-resistant, surviving for days in routinely-chlorinated water. The incubation period is 2-10 (mean = 7) days.

*Giardia intestinalis* (also known as *G. lamblia* and *G. duodenalis*) is the most common human intestinal parasite, with ~2 million cases annually in the U.S., with peak activity in June – October. (9) This flagellated protozoan (Figure 2) is also fecal-oral acquired. *Giardia* cysts also are acquired from contaminated food/water (e.g., backpackers) or from person-to-person (e.g. sexual oral-anal) or less often animal-to-person contact. Infected persons shed over a billion cysts per day and shedding can last for several months. Cysts survive best in cool water with a slightly alkaline pH. *Giardia* cysts survive for 30-60 minutes even in adequately chlorinated water, and for days if chlorine levels are not adequately maintained. Of note, the *Giardia* species that infects dogs and cats is usually different than the one infecting human. The incubation period is 7-21 days.

**Testing Stools:** The relatively new dual antigen EIA test detects either or both *Giardia* or *Cryptosporidia*. It is adequate for laboratory confirmation. (9-11) It is much less time-consuming and less expensive than the traditional microscopic inspection for ova and parasites. CAVEAT: It does not detect other parasites, so if one has concerns that other parasites might be present, the EIA is not sufficient. (9-11)
Coliform Testing of Water: There are two common tests for coliform bacteria, the membrane filter and the multiple tube fermentation methods. The results are interpreted differently for each. An acceptable result for the membrane filter method is <1 coliform/100 mL, but for the multiple tube fermentation procedure it is <2.2 coliforms/100 mL. So the baby pool in question was definitely above the cut off regardless of which method had been used. You may see three categories on water testing results as in that discussed above: Total coliforms, fecal coliforms and E.coli. Usually there are more coliforms than fecal coliforms than E. coli. (Figure 3) But any E. coli are worrisome. We haven't discussed disease-producing toxigenic or toxin-producing E. coli. We leave that to a later discussion.

Chemical Testing of Pools: Free chlorine levels of 1–3 parts per million (ppm) and pH 7.2–7.8 maximize disinfection but are ideal for eye comfort. (Figure 4) Hot tubs/spas need higher levels of chlorine (2–4 ppm) or bromine (4–6 ppm) but similar pH (7.2–7.8). Alkaline pH reduces disinfection capability of chlorine while pH below 7.2 is irritating to the eyes. Many pools are periodically hyperchlorinated to enhance chances of eradicating Giardia and Cryptosporidium (free chlorine levels at 20 ppm for 12.75 hours)

The Water Quality & Health Council (WQHC)'s Healthy Pools website is a place to order free test strips.

So if you see a nonfebrile patient with more than 3 days of diarrhea, bloating and cramping, consider a recreational water source. And if you need to interpret pool chlorine and pH levels or coliform testing, you are now prepared. But be in lockstep with your local health department to ensure a consistent message to patients and families.

References

Continued on Page 18


---

**AAP Federal Affairs Academic and Subspecialties Report**

The AAP Department of Federal Affairs has released its [Washington Report on academic and subspecialty advocacy](http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/PS/11-ID-14.pdf). The report provides updates on issues related to pediatric subspecialists and researchers including physician payment, access to care, workforce, pediatric drugs and devices and the federal budget and appropriations.
**Prophylactic Tactics:**

**Antibiotics after Tick Bite for Prevention of Tickborne Diseases**

*Christina Nelson, MD, MPH, FAAP, Medical Epidemiologist, Centers for Disease Control and Prevention, Division of Vector-Borne Diseases, Bacterial Diseases Branch*

A 10 year old boy comes to the ED in Kentucky. He pulled an attached tick off his leg a few hours ago and threw it away. Now his mother is worried that he might have a tickborne disease. Should he be given prophylactic antibiotics?

Throughout the warm weather months, scenarios like this occur in urgent care centers and primary care offices across the country—sometimes creating confusion among health care providers about the proper approach to management. Moreover, parents who are anxious about tickborne diseases may specifically request antibiotics.

Insufficient clinical data exists regarding the efficacy of antibiotic prophylaxis for Rocky Mountain spotted fever (RMSF), anaplasmosis, ehrlichiosis, tularemia, and babesiosis. Moreover, preventive treatment for RMSF has been shown to delay but not prevent the onset of symptoms in laboratory animals. Therefore, antibiotic prophylaxis after a tick bite is not recommended to prevent these diseases.

Lyme disease is transmitted by *Ixodes scapularis* ticks in the northeastern and upper Midwestern states and by *Ixodes pacificus* ticks in the northern Pacific region. A 2001 New York study found that a single dose of doxycycline after *I. scapularis* tick bite was 87% effective at preventing Lyme disease. Therefore, a one-time dose of doxycycline is warranted after a tick bite for adults and children ≥ 8 years of age when all of the following conditions are met:

1. Doxycycline is not contraindicated (due to pregnancy, allergy, etc.).
2. Lyme disease is common in the county and state where the patient lives or has recently traveled.
3. The tick was likely attached ≥ 36 hours. This can be determined by patient history or presence of tick engorgement.
   - A tick that is not engorged at all has been attached only for a short time and is very unlikely to transmit *Borrelia burgdorferi*.
4. Prophylaxis can be started within 72 hours of the time that the tick was removed.
5. The tick is likely an adult or nymph *Ixodes scapularis* (aka deer tick or blacklegged tick).

The recommended dose for children ≥ 8 years of age is 4 mg/kg up to a maximum of 200 mg. Of course, providers must use clinical judgment and balance the risks and benefits when prescribing any medication. Doxycycline can cause photosensitivity, nausea, vomiting, and rash even after a single dose.

In the example above, the patient does not live in an area at risk for Lyme disease so prophylaxis for Lyme disease is not indicated. States that are highly endemic for Lyme disease and where prophylaxis would potentially be indicated include: Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia, and Wisconsin. Lyme disease may occur in other states, but unless the local infection rate of *Ixodes* ticks with *B. burgdorferi* is very high (≥ 20%), the risk is not sufficient to warrant routine prophylaxis for tick bites.

For children under 8 years of age, tick bite prophylaxis for Lyme disease is not recommended. Studies of amoxicillin, penicillin, or tetracycline published in 1989-1993 reported that 10-day courses of these antibiotics were effective at preventing Lyme disease. Amoxicillin is currently used to treat Lyme disease in young children. However, due to its short half-life, a full 10-day course would be necessary for proper prophylaxis. In this situation, the risks appear to outweigh the benefits – an estimated 8 adverse reactions to the medication would occur (including one serious event) for every 10 cases of early Lyme disease prevented.

Patients who do not receive antibiotic prophylaxis can be counseled that the risk of Lyme disease after a single tick bite remains low. For example, a meta-analysis of tick bite prophylaxis found that the risk of infection among placebo groups...
was only 2.2%, despite including only patients from highly endemic states (CT & NY) who had a confirmed *I. scapularis* bite. Additionally, Lyme disease is a treatable condition, and those who take appropriate antibiotics in the early stages of infection usually recover rapidly and completely. Furthermore, recommending the use of specific prevention measures – such as avoidance of tick-infected areas, showering soon after coming indoors, and using insect repellent – will reduce the risk of Lyme Disease and other tick-associated infections, thereby avoiding many of these situations.

Remember that it is important to counsel all patients about return precautions after a tick bite. Patients who develop fever, rash, or other concerning symptoms within days to weeks of a tick bite should see their health care provider as soon as possible. **Patients with signs or symptoms of Rocky Mountain spotted fever, anaplasmosis, or ehrlichiosis should be treated immediately with a full course of doxycycline, regardless of age.**

For more information about ticks and tickborne diseases, see [www.cdc.gov/ticks](http://www.cdc.gov/ticks). CDC has recently developed a user-friendly guide, *Tickborne Diseases of the United States: A Reference Manual for Health Care Providers*. This guide includes helpful pictures and range maps of ticks that transmit disease, along with information on diagnosis and management of tickborne diseases. [Hard copies of the guide](http://www.cdc.gov/ticks) can be ordered and the [CDC has an app](http://www.cdc.gov/ticks), searchable by the term “Tickborne Diseases”.

**References**


2. CDC. Diagnosis and management of Rocky Mountain spotted fever, ehrlichiosis, and anaplasmosis – United States: a practical guide for physicians and other health-care and public health professionals. MMWR 2006;55.


*Note: Portions of this article first appeared in the Emergency Nurses Association newsletter.*
Spotlight on AAP International Affairs:  
*Argentinean Pediatric Society*

The AAP Office of International Affairs (OIA) comprises three major areas of focus: grants and programs, business development, and professional relationships. This feature focuses on key global health initiatives and international partnerships as it relates to infectious diseases.

*Angela Gentile, MD, Professor - Pediatric Infectious Diseases, President, Argentinean Pediatric Society*

The Argentinean Pediatric Society (SAP) includes about 18,000 pediatricians, located throughout the country and organized into 44 Subsidiaries and 9 Regions. Its technical groups work in Committees, for both general pediatric clinics (outpatient and inpatient) and pediatric specialties.

One of the most active is the National Committee on Infectious Diseases (CNI), which is made up of a National Central Board, and also Regional Boards in the major subsidiaries in the country. Its primary goal is to raise awareness of pediatric infectious diseases through the news, position papers, and updates, within the framework of the parent organization. The membership of almost 18,000 pediatricians allows more homogeneous care to be provided to the nation's children, regardless of the region they live in, respecting local characteristics, while at the same time making available prevention, diagnosis and treatment guidelines to all pediatricians.

CNI holds its National Congress every three years and holds yearly national conferences and is extensively represented at the National Congress of Pediatrics (CONARPE). The 2013 meeting was in Mar del Plata and the 2015 meeting will be held in Mendoza, on the western side of the Argentina. AAP Immediate Past President, Dr. James Perrin, will be representing AAP at that meeting. CNI's responsibilities at these conferences is to provide updates on specialty subjects for attending pediatricians (usually around 35 to 40% of the total) through panel discussions, interactive sessions, workshops, and distribution of the Society's specialty-related pediatric consensus and position papers.

CNI represents SAP on related matters at the country's Ministry of Health, through the National Committee on Immunization, analyzing calendar entries of existing vaccines and updating recommendations, among other things. The Ministry also actively participates in the discussion of Maternity and Childhood policies related to emerging pathology (new agents, outbreaks, pandemics), and regional and seasonal diseases, such as acute lower respiratory infections. Each Committee at the various subsidiaries provides a framework to provincial Ministries, jointly analyzing and deciding on policies related to childhood infections.

The Latin American Pediatric Association (ALAPE) and the Latin American Pediatric Infectious Diseases Society (SLIPE) actively work within the framework of the Southern Cone Pediatric Society Forum (FOSPECS), with the hopes that under the new agreement between SAP and AAP, active work can begin on common lines between both committees.

CNI is responsible for the specialty certification and recertification through the SAP Professional Evaluation Council (CEP). Certification is done annually through an oral and written examination and specialty writing. Recertification is achieved through credits earned by pediatric infectious diseases specialists through courses, publications, seminars, congress attendance and completion of professional tasks.

SAP has a publication specifically related to the subject, the *Pediatric Infectious Diseases Blue Book*, which is updated every other year. In addition, an annual modular course (TIPs) related to the specialty is also offered.

Pediatric infectious diseases specialists and other groups have a virtual SAP campus, which is a collaborative workspace allowing all the country's infectious disease specialists to share opinions and work.

More information can be found on the [Society's website](#), and from there, you can gain access to CNI activities.
New Policy/Guidelines
Andrea Sperduto, MD FAAP, Cleveland Clinic Foundation

I. AAP
      i. Was not published in full in Pediatrics.
      ii. To ensure most updated schedules, readers are directed to AAP website and CDC website.


      i. Updates and replaces 2012 Red Book recommendations.
      ii. Prophylaxis recommended for infants born before 29 weeks gestation.
      iii. Prophylaxis can be considered for preterm infants gestational age <32 weeks with chronic lung disease and an oxygen requirement for ≥28 days.
      iv. Certain infants with congenital heart disease.
      v. Certain immunocompromised infants.

      i. Updates and replaces 2012 Red Book recommendations.
      ii. Prophylaxis recommended for infants born before 29 weeks gestation.
      iii. Prophylaxis can be considered for preterm infants gestational age <32 weeks with chronic lung disease and an oxygen requirement for ≥28 days.
      iv. Certain infants with congenital heart disease.

      i. 4 Vaccines licensed in U.S. (1 polysaccharide and 3 conjugates) with conjugate vaccines preferred.
      ii. Vaccination of “at-risk” infants and immunocompromised individuals discussed.
      iii. Specific vaccine recommendations by age group in table format presented [Table 3 in article].

      i. Table 1 summarizes recommended pneumococcal vaccines in children with underlying medical conditions such as: chronic heart disease, chronic lung disease including asthma (if treated with prolonged high dose oral steroids), diabetes, HIV, chronic renal disease and oncology patients.

      i. Updates 2006 guidelines.
      ii. Recommends against administering albuterol, systemic steroids, epinephrine, or chest physiotherapy as treatment.
      iii. Recommends not using nebulized hypertonic saline in ER but may consider if hospitalized.
      iv. Evidence based data presented to support recommendations.

II. MMWR
      i. Outlines clinical use of 3 smallpox vaccines for persons exposed to small pox or at high risk for small pox infections.

Continued on Page 23
New Policy/Guidelines  Continued from Page 22

   i. Summarizes epidemiology of HPV.
   ii. Describes the 2 licensed vaccines: quadrivalent HPV vaccine (HPV4) and bivalent HPV vaccine (HPV2).
   iii. Provides updated data from clinical trials and post licensure safety studies.

III. HIV GUIDELINES
a. Guidelines for the Use of Antiretroviral (ARV) Agents in HIV-1-Infected Adults and Adolescents.
   i. Updated 11/13/14.
   ii. Revised section on Hepatitis C Virus/HIV co-infection with emphasis on drug treatment strategies.

   i. Updated 10/28/14.
   ii. Specifically updates the treatment of Hepatitis C virus, mucocutaneous candidiasis, and bacterial enteric infections.

Complete guidelines and information can be found at:  http://aidsinfo.nih.gov/guidelines
and are updated periodically.

IV. IDSA Guidelines
   i. Updates 2005 version.

* See also early release chapters of the 2015 Red Book regarding measles and hemorrhagic fevers caused by Filoviruses on p14.
SOID Leadership Roster  Continued from Page 23

Kenneth Zangwill, MD, FAAP
Harbor-UCLA Medical Center
David Geffen School of Medicine at UCLA
Torrance, CA
Telephone: 310/781-3636
EM: kzangwill@labiomed.org

WEBSITE CONTENT DIRECTOR
Lilly Immergluck, MD, FAAP
EM: lilly.immergluck@choa.org

NEWSLETTER CO-EDITORS
Jane M. Carnazzo, MD FAAP
EM: jmcarnazzo@cox.net
Jennifer S. Read, MD, MS, MPH, DTM&H, FAAP
EM: read@post.harvard.edu

NEWSLETTER EDITORIAL BOARD
Sherman Alter, MD, FAAP
EM: sherman.alter@wright.edu
Stephen Aronoff, MD, FAAP
EM: Stephen.Aronoff@tuhs.temple.edu
Annabelle de St. Maurice, MD, FAAP
EM: annabelle.dest.maurice@Vanderbilt.edu
Jane Gould, MD, FAAP
EM: Jane.Gould@DrexelMed.edu
Rana Hamdy, MD, FAAP
EM: rhamdy@gmail.com
Christopher J. Harrison MD, FAAP
EM: cjharrison@cmh.edu
Andrea Sperduto, MD, FAAP
EM: sperdua@ccf.org

EDUCATION/PROGRAM CHAIRPERSON
Ken Zangwill, MD, FAAP
EM: kzangwill@labiomed.org

EDUCATION SUBCOMMITTEE
Mayssa Abuali, MD, FAAP
EM: mayssa.abuali@gmail.com
Sherman Alter, MD, FAAP
EM: Sherman.alter@wright.edu
Leena Mithal, MD, FAAP
EM: lbhattacharya@luriechildrens.org
Robert Frenck, MD, FAAP
EM: Robert.Frenck@cchmc.org
William Hitchcock, MD, FAAP
EM: wmphitchcockmd@gmail.com
Lilly Immergluck, MD, FAAP
EM: Lilly.immergluck@choa.org
Sabah Kalyoussef, MD, FAAP
EM: sbenz61@gmail.com
Jennifer Read, MD, MS, MPH, DTM&H, FAAP
EM: read@post.harvard.edu
James Wilde, MD, FAAP
EM: jwilde@gru.edu
Charles Woods, MD, FAAP
EM: charles.woods@louisville.edu

AAP STAFF
Suzanne Kirkwood, MS
Manager, Section of Infectious Diseases
Phone: 800/433-9016, ext. 7648
Fax: 847/434-8000
EM: skirkwood@aap.org

Mark A. Krajecki
Journal Production Specialist