It has been my pleasure to serve as Guest Editor for this issue of Pediatric Annals, in which we discuss some of the challenges facing physicians who provide immunizations to our children and adolescents. Although medical school and residency training typically focus on teaching how to cure illness, all physicians who provide primary pediatric or adolescent medical care realize that prevention of illness is the most important focus. No area of illness prevention has better served children since the middle of last century than the development of vaccines against infectious diseases. Recommended pediatric immunizations are now started shortly after birth and continued through adolescence. These vaccines have saved untold numbers of children from infections that otherwise would have shortened their lives or left them mentally or physically handicapped. Yet this marvel of preventive medicine has recently become one of the most challenging areas of healthcare delivery.

In this issue of Pediatric Annals, we address some of these challenges.

We review issues of vaccine safety that have led some parents to refuse immunizations for their children. We highlight challenges of providing recommended vaccines to adolescents. We point out some of the misconstrued fears that surround yearly influenza immunizations. We demonstrate the need to keep up with shifting serotypes causing serious pneumococcal infections. We discuss the financial strain on physicians who provide the bulk of pediatric immunizations. Finally, we review some of the difficulties in knowing which vaccines to administer to children who are adopted from foreign countries.

The lead article by Michael Smith and Gary Marshall (see page 476) provides an excellent review of some of the key issues that have left many parents hesitant to immunize their children. Smith and Marshall create a timeline of events that have fostered parental concerns and then discussed the scientific data demonstrating the fallacy of these concerns. They remind us that vaccines are medical products, and like all medical products, they may result in serious adverse complications rarely. These rare complications are very difficult to detect in prelicensure clinical trials and depend on physicians and the public to report possible adverse events to the Vaccine Adverse Event Reporting System (VAERS). This system is essential, along with others, such as the Vaccine Safety Datalink (VDS), to identify unexpected adverse reactions, such as intussusception that followed the initial licensing of rotavirus vaccine. Despite the science that has disproved relationships between autism and MMR vaccine or thimerosal, Smith and Marshall point out that knowledge of the scientific data alone may be insufficient to quell parental concerns fueled by a growing list of anti-vaccine sites on the Internet and the anecdotal cases of allegedly vaccine-injured children presented on television and YouTube.

The most important factor in effective vaccine risk-benefit com-
communication is a trusting relationship between families and their primary care physician.

In the past several years, new vaccines have been developed specifically for the adolescent population. Despite the significant potential benefit of these vaccines, immunization rates for adolescents remain far below rates for younger children. Elyse Kharbanda and Jessica Kahn (see page 483) provide a thorough review of current recommendations for adolescent vaccinations and list major challenges that primary care providers face in attempting to adhere to these recommendations. They provide helpful suggestions to overcome each of these challenges.

Each year, all children between 6 months and 18 years are recommended to receive influenza vaccination. Yet, as recently as 2008-2009, less than 50% and 25% of children younger than or older than 2 years old, respectively, received their annual influenza vaccine. Although some of this deficiency may be explained by complacency, much is related to fear of vaccines and misinformation about adverse events from influenza vaccine. Romina Libster and Kathryn Edwards (see page 490) point out the burden of annual influenza illness in the United States and address these concerns by discussing the safety and effectiveness of the trivalent inactivated and the trivalent live attenuated influenza vaccines. They demonstrate the yearly vaccine challenge of keeping up with the shifts and drifts of influenza virus by providing data on the effect of the novel H1N1 strain of influenza that spread worldwide through the last influenza season and discuss how the novel H1N1 vaccine will be incorporated into the 2010-2011 influenza vaccines.

Streptococcus pneumoniae remains one of the leading causes of serious invasive bacterial infections in children. In 2000, a conjugated 7-valent pneumococcal vaccine was licensed and resulted in a markedly diminished incidence of serious S. pneumoniae infections. However, we are now challenged again by a rising incidence of serious invasive pneumococcal infections caused by serotypes not contained in the 7-valent vaccine. A new 13-valent pneumococcal vaccine was licensed this year. Michael Bolton and William Barson (see page 497) discuss the breadth of serious invasive pneumococcal infections and highlight the effect that the new vaccine should have on prevention of many of these infections.

The financing of pediatric immunizations has become one of the most frustrating and challenging aspects of providing primary care to children. Russell Libby and Richard Schwartz (see page 507) discuss steps that primary care physicians must consider in making the administration of vaccines a profitable component of their primary care practices. They provide helpful advice in understanding the true costs of administering vaccines in a private practice, and they discuss critical approaches to maximizing reimbursements for providing immunizations. They also list alternative ways to provide immunizations in a private office setting that may help the bottom line of sustaining a profitable business.

Although the number of internationally adopted children has declined over the past several years, the children who are being adopted tend to be older, more medically fragile, and increasingly are coming from countries where vaccination records are not available or may be questioned for accuracy. Kevin Spicer and Dwight Powell (see page 517) discuss why it is not necessary simply to revaccinate internationally adopted children with all recommended childhood vaccines. There are ways to evaluate the immunization status of internationally adopted children that can assure the probability that they have received at least some of the recommended vaccines, thus saving the child from many unnecessary injections.

doi: 10.3928/00904481-20100726-02
Dwight A. Powell, MD, earned his medical degree from the University of Illinois College of Medicine. He completed his pediatric residency at Metropolitan General Hospital in Cleveland and his infectious diseases fellowship at the University of North Carolina in Chapel Hill, NC. He is currently professor of Pediatrics at The Ohio State University College of Medicine and a member of the Section of Infectious Diseases at Nationwide Children’s Hospital in Columbus, Ohio. He served as Chief of the Section of Infectious Diseases at Nationwide Children’s Hospital from 1982 to 2010 and Director of the Internal Medicine/Pediatric residency program at The Ohio State University from 1986 to 2004. Since 2004, he has served as the director of the Tuberculosis Clinic and International Adoption Clinic at Nationwide Children’s Hospital.

Dr. Powell has published numerous articles and book chapters on various infectious disease topics. He has received many teaching awards, including Nationwide Children’s Hospital Pediatrician of the Year, Golden Stethoscope award from the Children’s Hospital Alumni Association, Career Contribution Award from Nationwide Children’s Hospital, as well as Faculty Teaching award and The Distinguished Educator award from The Ohio State University. He has been an invited speaker at many American Academy of Pediatrics (AAP) conferences, including the Annual National Conference, the Pediatrics Review and Education Program (PREP) ID course, Practical Pediatrics CME course, and PREP: The Course. He is currently a member of the Executive Committee of the AAP Section of Infectious Diseases (SOID) and Chairman of the SOID education committee. He is also a member of the planning committees for the AAP PREP ID course and for the AAP Practical Pediatrics continuing medical education (CME) course.