

Time for Changes in Immunization Inactivated Poliovirus Vaccine and a Family Practice Immunization Book

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In this issue of the *Journal*, Kimmel and colleagues¹ report the findings of a valuable study of Ohio family physicians' and pediatricians' beliefs about and reported practices of poliovirus immunization. The authors, led by Dr Kimmel, the chairman of the Group on Immunization Education of the Society of Teachers of Family Medicine, found that all physicians were aware of the 1997 poliovirus recommendations, but preferential use of oral poliovirus vaccine (OPV) was related to concerns about the cost of inactivated poliovirus vaccine (IPV) and increased number of injections, while use of the sequential schedule was a reaction to concerns about the risks of vaccine-associated paralytic poliomyelitis (VAPP) and liability.

Kimmel and coworkers found that 63% of family physicians administered OPV, while 67% of pediatricians administered the sequential schedule. Family physicians seem to be more concerned with cost than pediatricians and less concerned with litigation risk; these economic findings parallel findings by other researchers.^{2,3}

One of the main reasons that the American Academy of Family Physicians (AAFP) encouraged parent-provider choice (instead of quickly recommending IPV) was the possibility that the number of injections in the sequential sequence could lead to outbreaks of other vaccine-preventable diseases if immunization rates dropped, especially in disadvantaged areas. The higher cost of IPV was another concern. Also, there was discussion of the importance of intestinal immunity, which is better when OPV is in the schedule. Thus in my opinion, the AAFP position was quite reasonable in 1997. However, in mid- and late 1998 when the price of IPV dropped, and when data became available that showed additional injections of IPV did not have an adverse impact on immunization rates even in disadvantaged communities, the AAFP position appropriately changed.

I believe that the poliovirus vaccine series should start with IPV, and that it makes sense to move to the all IPV schedule for the year 2000. I offer several reasons. First, exposure to indigenous wild poliovirus in the United States has ceased. This is because of dramatic progress in poliomyelitis prevention; in 1994 the Americas were declared free of indigenous poliomyelitis, with the last case occurring in 1991 in

Peru.^{4,5} There have been no cases of wild poliomyelitis contracted indigenously in the United States since 1979, and widespread circulation of indigenous wild polioviruses ceased in the 1960s.⁶ Second, OPV has a slight risk of VAPP, which can occur when the oral vaccine virus reverts to a more virulent form. Of the 125 cases of VAPP reported between 1980 and 1994, the affected individuals were: healthy vaccine recipients (49); healthy contacts of vaccine recipients (40); immunodeficient vaccine recipients (23); immunodeficient contacts of vaccine recipients (7); and community-acquired cases (6).⁷ VAPP was more common after the first dose of OPV in the all oral vaccine series; 40 of the 49 cases in healthy vaccine recipients occurred after the first dose. The overall risk of VAPP from the all oral vaccine series was 1 case per 2.4 million doses of OPV distributed (125 cases for the 303 million doses of OPV distributed in that time period).⁷ The risk for the first dose is 1 case per 750,000 first doses distributed. VAPP is paralytic; patients suffer, and their lives are often irreversibly altered. I believe that we can no longer justify the all OPV series in the United States, except in special limited circumstances, such as imminent overseas travel involving an infant. Third, IPV not live, cannot cause poliomyelitis, and thus is safe for immunocompromised patients. Fourth, the majority of parents (61%) prefer to have their child undergo more injections rather than face the possibility of VAPP.⁸ Fifth, the cost of the inactivated and oral vaccines are now equivalent in the private sector, if ordered from the manufacturer directly (although the book price and the public purchase price of IPV are higher). Sixth, data show high acceptance (91%) of an IPV-starting schedule among parents bringing their children to public health vaccine clinics, including those serving inner-city disadvantaged areas, without decreases in immunization rates.⁹ Seventh, media attention on antivaccine efforts has grown, and VAPP is an issue due to OPV. Eighth, it is easier to administer and store 1 vaccine (IPV) than to explain the choices and stock 2 vaccines.

Kimmel and colleagues and others^{1,3} have also noted that dissemination of information on immunization protocols differs between the specialties and, other than the annual recommended schedule, pediatricians often hear the details first. Detailed recommendations on poliovirus vaccine appeared in 1997 in *Pediatrics*¹⁰ but *American Family Physician* printed the information in January 1999¹¹ (although editorials and brief reports appeared before the detailed article, which was delayed because of late-breaking research and policy changes).

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Family physicians and pediatricians should differ for several reasons. For instance, specialty differences start in training, as most family practice residencies are based in community hospitals and emphasize outpatient medicine, while many pediatric residencies are based in tertiary care institutions with a greater emphasis on inpatient treatment. Following residency training the specialties differ again, with family physicians usually starting in practice, often in small towns, while many pediatricians pursue fellowships. The history of family medicine as a specialty that emphasizes outpatient medicine and the physician-patient relationship leads naturally to less emphasis on the judgment of a tertiary care specialist and more on shared decisions that reflect the patient's values and economic situation. Immunization information sources also vary by specialty. Most pediatricians (74%) rate the *Red Book*¹² the most important source for information, while family physicians cite a variety of sources: journals (44%), *Red Book* (34%), health department (11%), colleagues (5%), and others (6%).¹³

I believe that more timely in-depth dissemination of information on immunizations is needed for family physicians. Family physicians do differ from pediatricians, however, so the development of tools for delivering this information to family physicians is needed. There are many reasons why now is the time for a detailed and evidence-based text on immunizations across the life span by family physicians for family physicians:

- A cadre of experienced educators, clinicians, and researchers now exists within family medicine that can make sound evidence-based decisions (ie, the Group on Immunization Education in the Society of Teachers of Family Medicine and the Commission on Clinical Policies and Research in the AAFP).

- The AAFP took the lead in immunizations by being the first national organization to recommend routine influenza vaccination at age 50, a cost-effective recommendation that is supported by solid medical evidence.

- Family physicians who treat patients across the life span differ from physicians of other specialties and often partner with patients in decision making.

- Family physicians lack a single definitive text on immunizations and lack consensus on where to turn for this information.

- The immunization texts of other specialties lack family physician input and perspective.

- The immunization field is changing rapidly and will continue to do so.

To be successful, this text will need strong support from our professional societies, since distributing it widely will be expensive, and keeping it current will require considerable effort. Kimmel and coworkers have shown us that beliefs and information dissemination differ by specialty. I believe that it is time for family medicine to take the next step with an immunization textbook by our professional societies.

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