

The Forum

NEWSLETTER OF THE MASSACHUSETTS CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

PRESIDENT'S MESSAGE

MCAAP at the Crossroads

The chapter is growing in ways that are not readily visible to the members.

Through our advocacy mission we have become more visible in the legislative and regulatory arena. Groups with missions similar to ours seek our support, endorsement, and advice. The "traffic" generated in the office is immense.

We are moving forward with three major advocacy efforts. The Immunization Initiative has been going for several years. This year we have also forged a coalition with insurers, providers, and advocacy groups concerning children's mental health. Insufficient services and lack of access to existing services is at crisis proportion. The third initiative is the development of the medical home for special needs kids.

To meet these and other growing needs, we are building up our infrastructure. Our staffing will become full time. Our financial reserves are invested. We are developing a Foundation that will oversee our education mission and complement the advocacy mission of the MCAAP. We are planning major fundraising activities to fund the Foundation.

We bring great value to the pediatricians and their patients but this value is not fully appreciated by all. Close examination of the AAP database on membership reveals that MCAAP membership could double if all the pediatricians in the state stepped up to the plate and joined us. This should be the chapter's next big initiative. We must market the accomplishments of the chapter to ourselves. Doubling our membership will bring even greater value to the children of Massachusetts.

— Eugenia Marcus, MD

Minor Flu Vaccine Delay Anticipated

David Chung, MD

Because of production delays, this year's flu vaccine supply is being delivered in partial shipments. Last year's vaccine delay was primarily due to technical difficulties in growing one of the influenza virus strains. The manufacturing capacity was also affected by a reduction in the number of companies that produce the influenza vaccine. This year's flu vaccine supply is estimated to be larger than last year's and comparable to that of two years ago.

Massachusetts Department of Public Health officials have recently received one third of the vaccine supply and anticipate that the remainder will arrive by late October. Since flu activity in Massachusetts typically begins in December and peaks in January and February, most patients should be able to receive the vaccine before the high-risk period. Keep in mind that the maximal immune response typically takes two weeks following injection to develop. Public health officials are also preparing for the vaccine delay in Nevada, where early immunization is even more of an imperative — the flu season there typically begins in October and peaks in December.

The vaccine supply is always subject to last-minute adjustments relating to viral yield in the manufacturing process, so the vaccine supply could ultimately be greater or less than anticipated. Vaccine administration should be prioritized for those people at high risk for disease. Among children **6 months and older** in particular, those with the following risks should be immunized as soon as possible:

GROUP 1

- ★ Chronic pulmonary or cardiovascular disease, including asthma
- ★ Chronic metabolic diseases, including diabetes
- ★ Renal dysfunction such as chronic renal failure and nephrotic syndrome
- ★ Hemoglobinopathies, such as sickle cell disease
- ★ Functional or anatomic asplenia
- ★ Immunosuppression caused by other diseases, medications, or treatments

★ Any condition that requires daily treatment with aspirin, such as Kawasaki's disease



Adults with these conditions should also receive prioritized vaccine administration. In addition, vaccine should be given to women who are in the second or third trimester of pregnancy during flu season.

GROUP 2

- ★ Health care personnel

GROUP 3

- ★ Household members of people in Group 1

In my practice, last year's vaccine supply was so tight we had to subdivide Group 1 individuals into two priority levels. From a practical standpoint, many practices can use CPT and ICD-9 codes stored in the practice management system to create a recall list of patients with certain diagnoses or those who received the vaccine in previous years. Recognizing that most pediatric practices are not adequately set up to care for patients with chronic illness and that parental interest in additional vaccines is relatively low, there is good data to suggest that only 10

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MASSACHUSETTS CHAPTER
AMERICAN ACADEMY OF PEDIATRICS
PO Box 9132, Waltham, MA 02454-9132

Executive Director

Bonney Erskine
(800) 322-2303, x7314; Fax: (781) 893-2105
E-mail: berskine@mms.org

Forum Editor

David Chung
E-mail: david@beansprout.net

Chapter President

Eugenia Marcus
Newton (617) 244-8664; Fax: (617) 244-8674
E-mail: emarcus@pediatrichealthcare.com

Vice-President

Sean Palfrey
Boston (617) 414-5202; Fax: (617) 414-4541
E-mail: sean.palfrey@bmc.org

Treasurer

Carole Allen
Arlington (781) 643-7155; Fax: (781) 643-0540

Secretary

Lynda Young
Worcester (508) 752-4511; Fax: (508) 797-4729
E-mail: lmyoung@massmed.org

Legal Counsel

Edward Brennan, Esq.
Kirkpatrick & Lockhart
Boston (617) 951-9143; Fax: (617) 951-9151

District 1

David Sigelman
Holyoke (413) 536-2393; Fax: (413) 536-1087
E-mail: sigelman@javanet.com

District 2

David Norton
Ware (413) 967-2040; Fax: (413) 967-2044
E-mail: david.norton@bhs.org

District 3

Julie Meyers
Uxbridge (508) 278-5573; Fax: (508) 278-7142
E-mail: meyersj@ummhc.org

District 4

Bruce Korf
Boston (617) 525-5750
E-mail: bkorf@partners.org

District 5

Michael Gilchrist
Chelmsford (978) 250-4081; Fax: (978) 250-3956
E-mail: dr mike@childdocs.com

District 6

Suzanne Graves
Beverly (978) 927-4980

District 7

Jonathan Finkelstein
Boston (617) 509-9898; Fax: (617) 509-9861
E-mail: jonathan_finkelstein@hphc.org

District 8

Kevin P. Petit
Boston (617) 636-4194; Fax: (617) 636-1456
E-mail: kevin.petit@es.nemc.org

District 9

Jordan Leff
Brockton (508) 894-0400; Fax: (508) 894-0618
E-mail: jordanhleff@netscape.net

District 10

Arthur Blasberg, III
Plymouth (508) 747-9700; Fax: (508) 747-2290
E-mail: ablas@adelphia.net

From the Editor

PEDIATRICIANS APATHETIC ABOUT BOARD RECERTIFICATION CHANGES

ap-a-ty (ăp'əthē) *n.* Lack of interest or concern, especially regarding matters of general importance or appeal; indifference.

In a previous issue of *The Forum*, readers were informed of a change in American Board of Pediatrics policy regarding board recertification. In essence, beginning in 2003 the recertification exam will change from a home computer-based exam to a proctored exam at centralized test locations. Proponents of the change hope that proctored exams will increase public confidence in the board exam value and provide additional safeguards for examinee identification. Detractors note that the centralized examination may create unreasonable demands on physician time and incur significant travel expenses. In addition, technologies will be available prior to the 2003 implementation that will provide strong identification of examinees regardless of location.

Readers were invited to share their opinions to create a composite letter from the MCAAP membership reflecting all

viewpoints. As we go to press, I have received only one response. The most appropriate time to either support or amend a policy change is prior to implementation. If you find in 2003 that the board recertification process is extremely tedious, complaints at that time will be of little utility. If you support the recertification process, you ought to register your support now so that squeaky wheels like me are not heard over the majority opinion.

Please e-mail your opinion to me at david@beansprout.net or fax to my attention at (508) 584-0230. I would like to have a sample size of at least 100 opinions in order to demonstrate a significant response. If it is easier, you can use the form on page 7. In the future, we would like to be able to notify and poll our membership regarding important issues via e-mail. If you have not done so already, please send your e-mail address to Bonney Erskine at berskine@mms.org for notification on issues that are important to Massachusetts pediatricians.

Vaccine delay

Continued from page 1

to 25 percent of asthmatics receive the recommended flu vaccine every year. (Chung EK, et al. Routine influenza vaccination rates in children with asthma. *Ann Allergy Asthma Immunol* 1998;80:318-22 and Kramarz P, et al. Influenza vaccination in children with asthma in Health Maintenance Organizations. *Vaccine* 2000;18:2288-94.) Additionally, last year's flu season was on the mild side, which may decrease public demand for the flu vaccine. Providers are en-

couraged to perform active recalls of high-priority patients.

Clinicians should also remember that those children under age 9 who are receiving the flu vaccine for the first time need two doses of the vaccine one month apart. Although this is sometimes referred to as a "split dose," a full dose of the flu vaccine is given at each visit and should not be confused with the "split virus" vaccine, which is the only flu vaccine recommended for children 6 months to 12 years of age.

MCAAP COMMITTEES & ADMINISTRATIVE APPOINTMENTS

AAP Breastfeeding Coordinators Susan Browne & Jean Sheeley	Continuing Medical Education Lynda Young	Infectious Disease Sean Palfrey	MMS Interspecialty Committee Rep. Eugenia Marcus Kevin Petit
Accident Prevention & Poison Control Paul Schreiber	Developmental Disabilities Richard Antonelli	International Child Health Lisa Albers	Nutrition Ronald Kleinman
Bylaws Committee Carole Allen	Emergency Pediatric Services Pat O'Malley	Legislative Richard Ringel	Pediatric Council Walter Harrison
Catch Co-Coordinator David Keller Emily Roth	Environmental Hazards Jordan Leff	Massachusetts Healthy Families Howard King	Pediatric Practice Open
Child Abuse Robert Nelken	Fetus and Newborn Elizabeth Brown	Membership Ernest Wu	PROS Network Coordinator Henry Bernstein
Children's Advocacy Board Barry Zuckerman	Finance Carole Allen	Mental Health Howard King	Public Relations Michael Rich
Committee on Adolescence Harris Faigel	Forum Editor David Chung	Mental Health Task Force Walter Harrison Eugenia Marcus	School Health Linda Grant
	Foster Care Robert Abrams	MMS Delegate/House of Delegates Carole Allen	Substance Abuse Alan Woolf
			Technology Open

What is the MCAAP Doing for You?

David Chung, MD

It is common knowledge that mental health services in Massachusetts are limited at best. Have you ever wondered how to access those services that are available? In pediatrics, most mental health crises are brought to the attention of a pediatric provider by a phone call from a parent. Often providers feel compelled to refer patients to emergency rooms for acute mental health evaluations. Unfortunately for families, this can lead to an escalation of tension among family members, and the amount of time spent in an emergency room for an evaluation can exceed 12 hours. If access to care were improved, one could imagine that outpatient evaluation and management would result in better outcomes for many children with mental health problems. Although mental health issues are not restricted to lower income levels, it is true that children insured by MassHealth or those without insurance are at significantly higher risk for needing mental health services.

In one of its many initiatives to improve mental health service availability and access, the MCAAP has been working with the Massachusetts Behavioral Health Partnership (MBHP), the organization responsible for providing mental health services for MassHealth and patients without insurance. In the previous issue of *The Forum*, we compiled a list of Emergency Service Providers (ESPs) who can perform acute mental health evaluations, either over the phone or on-site, regardless of insurance status or ability to pay. The purpose of publishing this list is to provide pediatricians with a reliable source of information for use during a mental health crisis, because the last thing a patient or doctor needs during a time of mental stress is a runaround on the phone. You can access old issues of *The Forum* by visiting the MCAAP website, www.mcaap.org.

The MCAAP continues to advocate on your behalf in addition to advocating for the children in the Commonwealth. Please see the Legislative Report in the previous issue to review some of the chapter's child advocacy initiatives. In order to be effective, we need your input and support. What are the major issues facing your practice? What type of involvement would you like to have in shaping pediatric practice in Massachusetts? Please feel free to e-mail the chapter president, Dr. Eugenia Marcus, at emarcus@pediatrichealthcare.com or the executive director, Bonney Erskine, at berskine@mms.org.

Every Child Deserves a Medical Home

The American Academy of Pediatrics (AAP) and the Shriners Hospitals for Children will offer the "Every Child Deserves a Medical Home" educational program in Boston, Massachusetts, on Saturday, November 17, 2001, at the Shriners Burns Hospital in Boston. This program is a collaborative effort with the Massachusetts Chapter of the American Academy of Pediatrics.

The program gives strategies and resources for pediatricians, family physicians, allied health professionals, and families to provide optimal care to special needs children in a changing health care environment. Its components include: practices, policies, and procedures; care coordination and strategies for providing family-professional partnerships; the transition of children with special needs to adulthood; and a panel discussion covering current issues pertaining to the care of special needs children in the community.

The target audience includes pediatric health professionals and their staff, families of children with special needs, managed care professionals, policymakers, community members, and other professionals who care for children with special needs.

The registration fee for physicians, nurses, educators, and other health professionals is \$50. There is no charge for medical residents or parents of children with special needs. Limited scholarships for parents of children with special health needs are available to help cover child care and other expenses.

Registration material is now available. Participants may register online at www.aap.org (click on "Community Pediatrics," "Medical Home Training," then click training sites). To receive a brochure by mail or fax, call (800) 433-9016, ext. 7081, or e-mail mhtraining@aap.org.

The AAP believes that all children, particularly children with special needs, should have a medical home where health care services are accessible, family centered, continuous, comprehensive, coordinated, compassionate, and culturally competent.

FORUM JOB LISTINGS

LOOKING TO BE HIRED:

Contact: Jonathan Winickoff, MD, MPH
MGH Center for Child and Adolescent Health Policy
50 Staniford Street, Suite 901
Boston, MA 02115
(617) 724-1062 phone
(617) 726-1886 fax
jwinickoff@partners.org

Residency: Children's Hospital, Boston

Graduation: June 2000

Availability: July 2001

Comment: I am currently finishing a health services fellowship at Mass General Hospital and will be available for 3 to 4 sessions per week starting July 1st (or sooner by special arrangement).

Looking to Hire or Be Hired?

Job listings are a free service provided by *The Forum* to MCAAP members and residents completing their training. Non-members may submit ads for a fee.

If you are looking to fill a position

MCAAP members: Free

Non-members: \$250

Please submit the following information:

- Practice Name
- Position Title and Description (25-word limit)
- Availability (e.g., starting June 2001)
- Contact Name
- Address, Telephone Number, E-mail address

If you are looking for a job

MCAAP members and residents: Free

Non-members: \$50

Please submit the following information:

- Your Name
- Contact Information
- Residency Program
- Availability (e.g., available now)
- Comment (25-word limit)

Please send text information via e-mail to david@beansprout.net. Checks may be mailed to the MCAAP office c/o Bonney Erskine, Executive Director, P.O. Box 9132, Waltham, MA 02454-9132. All submissions must be received by December 15, 2001, to be included in the next issue of *The Forum*. All submissions are subject to review for appropriateness. For further information, please contact the editor at david@beansprout.net.

Fluoride Update

PRESENTED BY THE MASSACHUSETTS ACADEMY OF PEDIATRIC DENTISTRY

Sandy Zaragoza, DMD, and Andrew Sonis, DMD

Dental fluorosis in the form of discolored or “speckled” permanent incisors has increased dramatically since the 1980s with the increase in municipal water fluoridation programs. This condition is caused by a subsurface hypomineralization defect and begins around 22 months of age when the crowns of the permanent incisors are mineralizing. Although this condition is relatively harmless, it is of great concern to both our patients and their parents because of the associated cosmetic problems. Fluorosis cannot be directly attributed to water fluoridation but likely represents a marked increase in the use of fluoridated toothpaste and the unregulated fluoride content of foods and beverages made with fluoridated water, the so-called “halo effect” (see Tables 1 and 2).

The ingestion of fluoridated toothpaste can also provide levels of fluoride well beyond those currently recommended. Most toothpaste contains fluoride in a concentration of 1000 to 1500 parts per million. An inch of toothpaste, as is frequently displayed in advertising, delivers approximately 1 milligram of fluoride, the recommended dose for a child over the age of six years. Because most children under the age of 6 swallow the toothpaste, it is likely that they are ingesting several times the recommended fluoride concentration. Recognizing this problem, the recommended dosages for systemic fluoride prescribed to children living in non-fluoridated communities were reduced in 1994. Additionally,

toothpaste manufacturers have also limited the recommended amount of toothpaste to a “pea size” drop for young children. These changes were initiated in a joint effort by the American Academy of Pediatrics and the American Academy of Pediatric Dentistry to decrease the incidence of dental fluorosis.

A more recently recognized problem relating to fluorosis concerns children living in optimally fluoridated communities who are fed concentrated or powdered formulas. An infant has to consume only four 4-ounce bottles of powdered formula reconstituted with tap water to reach a dose of 0.5 mg of fluoride — twice the recommended dose for a child under the age of 3 years! To guard against excessive fluoride ingestion, concentrated formulas should be reconstituted with bottled water containing no fluoride.

Unfortunately, not all bottled water is created equal. Some brands actually contain significant concentrations of fluoride. For example, Dannon Fluoride to Go, marketed in 255 mg bottles,

Table 2. Fluoride Concentration in Commercial Fruit Juices and Drinks

PRODUCT	BRAND	FLUORIDE LEVEL		
		Low	Moderate	High
Apple				
(100%)	Ocean Spray	•		
(100%)	Stop & Shop		•	
(100%)	Mott's		•	
(100%)	Minute Maid			•
Apple-Cherry	Beech-Nut		•	
Apple-Cranberry	Beech-Nut			•
Apple-Grape	Hi-C			•
Apple-Plum	Hi-C			•
Fruit Apple (50%)	Stop & Shop			•
Stage 1	Beech-Nut	•		
Cranberry				
	Ocean Spray	•		
	Veryfine		•	
Cran-Blueberry	Ocean Spray		•	
Cran-Raspberry	Ocean Spray		•	
Cran-Apple	Ocean Spray			•
Grape				
	Welch's			•
White Grape	Welch's			•
(100%)	Welch's			•
White Grape	Minute Maid			•
	Minute Maid			•
	Stop & Shop			•
Grape Beverage (artificial)	Tropicana		•	
White Grape	Ocean Spray	•		
	Gerber			•
Miscellaneous				
Fruit Punch	Ocean Spray	•		
Mixed Fruit	Ocean Spray			•
Mixed Fruit	Beech-Nut		•	
Pear, Stage 1	Beech-Nut		•	
Prune	Stop & Shop		•	
Orange Drink	Tropicana		•	
Pineapple	Minute Maid			•
Peach	Dole			•
Tropical Blend	Beech-Nut			•

Table 1. Fluoride Concentration in Bottled Water

BRAND NAME	FLUORIDE LEVEL		
	Low	Moderate	High
Artic Polar			•
Aqua Cool		•	
Balsam Spring	•		
Crystal Geysler			•
Evian	•		
Heart of Tuscany	•		
Henniez	•		
Ice Mountain			•
Naya		•	
Nemasket	•		
Perrier		•	
Poland Springs	•		
Ramlosa			•
Saratoga		•	
Shaw's		•	
Simpson Spring	•		
Spareal		•	
Spring Hill Farm	•		
Star Market		•	
Stop & Shop		•	
Tipperary		•	
Triton Spring Water	•		
Volvic		•	

Fluoride Update

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contains 1 ppm of fluoride, the same concentration as optimally fluoridated tap water. A liter of this product (about four bottles) would deliver the optimal amount of fluoride for a child over 6 years of age residing in a nonfluoridated community. Distilled water has no fluoride, and several bottled water brands have low or minimal amounts of fluoride. Table 1 lists the most common brands of bottled water and their respective fluoride levels.

Certain water filtering systems (such as reverse osmosis and distillation systems) can remove almost all of the fluoride from the household water supply in fluoridated communities. In contrast, simple activated charcoal water filtering systems or pitcher filtering system (such as Brita, Pur Plus) do not remove fluoride from the water.

In conclusion, while water fluoridation continues to be the most cost-effective means of reducing tooth decay, it is important to remember that there can be “too



Recommended Daily Water Consumption (8 oz. glass size)

AGE	GLASSES/DAY
Age 3 & younger	1 (1/4 liter)
Age 3-6 years	2 (1/2 liter)
Age 6 & older	4 (1 liter)
Adult	8

much of a good thing” as it applies to fluoride intake. The provider must consider all sources of fluoride before making recommendations.

Commercial fruit juices differ significantly in their fluoride content, as depicted in Table 2. If your patient lives in a fluoridated community but does not drink much water, consider recommending frozen concentrated juices that are reconstituted with tap water. That way the child will receive the benefits of fluoride with every drink of juice. Remember that an infant should never be put to bed with a bottle, especially one filled with juice. If necessary, it would be better to fill the bottle with water only, to prevent early childhood tooth decay.

REACH 1200 PEDIATRICIANS VIA THE FORUM

Contact the editor at
david@beansprout.net
for ad rate information

IMPORTANT UPDATES FROM MCAAP

Send your e-mail address
to Bonney Erskine at
berskine@mms.org
to receive occasional
important updates
from the chapter

Foster Care Committee Lobbies for Improved Health Records Access

Robert M. Abrams, MD

About a year ago the MCAAP, in conjunction with the Massachusetts Department of Social Services, mailed out to the membership the mandated guidelines for the medical evaluation of children who are placed in foster care.

These children are supposed to have an initial medical evaluation for acute medical conditions within the first seven days of placement. Also, within one month newly placed foster children are to have a Comprehensive Health Assessment that includes the evaluation of the child's developmental, educational, and emotional status.

These guidelines were garnered from a 1988 Child Welfare League of America document and from the American Academy of Pediatrics Policy Statement that was published in *Pediatrics* in February 1994 (pp. 335-338).

Unfortunately, a survey of newly placed foster children in Massachusetts revealed that only 11 percent of these children received the emergency evaluation by physicians in Massachusetts.

Even fewer have received the complete evaluation.

There are several reasons for this failure to provide appropriate care. The Massachusetts DSS has been in a state of flux. The person designated to implement these mandates resigned several months ago, and DSS has not filled the position. Funding of the evaluations by the Department of Medical Assistance has been a problem because many of these newly placed foster children are seen by providers who are not the children's primary care physician of record. There is no system in place for a social worker to trace past medical records and immunizations.

Linda Sagor of the UMass Medical Center, Ed Bailey of North Shore Children's Hospital, and I last met with representatives of DSS over a year ago. We have asked to meet with the new DSS administrators to help implement their mandate.

If any of the membership is interested in joining the foster care committee, please contact Bonney Erskine at berskine@mms.org.

General Guidelines for Vaccine Administration July 2001

I. General Recommendations

- 1. Handwashing and Use of Gloves:** Hands should be washed before each new person is immunized. Gloves are not required when administering vaccinations, unless the persons administering vaccines will come into contact with potentially infectious body fluids or have open lesions on their hands.
- 2. Use of Needles and Syringes:** Syringes and needles for vaccine injections must be sterile, and preferably disposable, to minimize the chances of contamination. Changing needles between drawing the vaccine into the syringe and injecting it is not necessary, unless indicated in the package insert. After use, needles should not be recapped, bent, or broken. Used needles and syringes should be discarded in specially labeled "sharps" containers to prevent accidental inoculation or theft.
- 3. Injection Route and Needle Size:**
 - a. For Intramuscular (IM) Injections:** A 22-25 gauge needle is appropriate for most IM injections. The needles used for IM injections should be long enough to reach the substance of the muscle.

Infants and Young Children: Ordinarily, a needle 7/8 to 1 inch long is required to ensure penetration of the thigh muscle in normal 4-month-old infants, and the thigh or deltoid in toddlers and older children. For very young, small infants **only**, a 5/8" needle may be adequate.

Adolescents and Adults: The deltoid is preferred for

adolescents and adults. The needle length should be 1 to 2 inches, depending on the individual's weight: 1) women <70 kg: 1"; 2) women 70-100 kg: 1.5"; 3) men ≤ 120 kg: 1"-1.5" and 4) women >100 kg and men >120 kg: 2".

b. For Subcutaneous (SC) Injections: Use a 23-25 gauge needle, 5/8 to 3/4-inches long, and administer in the anterolateral aspect of the thigh or the upper arm by inserting the needle in the pinched-up fold of the skin and subcutaneous tissue.

- 4. Post-Vaccination Bleeding:** A brief period of bleeding at the injection site is common and can usually be controlled by gentle pressure for several minutes. Use of adhesive bandages on an injection site for more than 1 or 2 hours can mask an infection and is discouraged.
- 5. Patients with a Bleeding Diathesis:** All vaccines (with exception of Hib, described below) that are indicated to be given intramuscularly should be administered as such. The risk of bleeding after an IM injection in these patients can be minimized by administration of vaccines immediately after the patient's receipt of replacement factor. Use a 23-gauge (or smaller) needle with immediate application of direct pressure to the vaccination site for at least 2 minutes. Hib vaccines, except PRP-OMP (PedVaxHib), may be given subcutaneously to those at risk for hemorrhage, such as

Table 1. Guidelines for Spacing the Administration of the Live and Killed Vaccines

Antigen Combination	Recommended Minimum Interval Between Doses
≥2 Killed Antigens	None. May be administered simultaneously or at any interval between doses. (Exceptions, see #2 below.)
Killed and Live Antigens	None. May be administered simultaneously or at any interval between doses. (Exceptions, see #2 below.)
≥2 Parenterally Administered Live Antigens	4-week minimum interval if not administered on the same day. (Exceptions, see #3 below.)

II. Spacing of Vaccines

A. Administration of Live and Killed Vaccines

- 1. Minimum and Maximum Intervals Between Doses:** Decreasing the interval between doses of a vaccine series may interfere with antibody response and protection. However, it is **not** necessary to restart the series of any vaccine due to **extended** intervals between doses.
- 2. Simultaneous Administration of Vaccines:** In general, there are no contraindications to the simultaneous administration of almost all vaccines. The **exceptions** for killed vaccines are cholera, whole cell killed typhoid, and plague vaccines, which, whenever feasible, should **not** be given at the same time because local and systemic side effects may be accentuated. It is preferable to give these vaccines on separate occasions. The **exceptions** for killed and live vaccines are yellow fever and cholera vaccines, which should **not** be given at the same time due to decreased antibody response to both of these vaccines. These vaccines should be separated by ≥3 weeks. Sufficient data are currently not available to determine the efficacy of Lyme disease vaccine when given with other vaccines, live or killed. The exceptions are summarized in Table 1 above.

When multiple vaccines are administered simultaneously, separate sites should be used if possible, particularly if DTaP vaccine is given. When necessary, two vaccines can be given in the same limb in a single visit. The thigh is the preferred site for two simultaneous IM injections because of its greater muscle mass. SC injections may also be given at this site. The distance separating the two injections should be 1-2", so that local reactions are unlikely to overlap. Multiple vaccines should not be mixed in a single syringe unless specifically licensed and labeled for administration in one syringe.

- 3. Administration of Live and Killed Antigens:** Inactivated vaccines generally do not interfere with the immune response to other inactivated vaccines or to live vaccines. Theoretically, the immune response to one live-virus vaccine might be impaired if administered ≤4 weeks after another live-virus vaccine. Parenterally administered live-virus vaccines (single-antigen measles, mumps and rubella vaccines, combination MMR vaccine, varicella vaccine, yellow fever vaccine) that are not administered simultaneously should be administered ≥4 weeks apart.

The **exceptions** are: oral polio vaccine (OPV) and oral typhoid, which can be administered at any time before, with, or after MMR, varicella, or other parenterally administered live virus vaccines. These recommendations are summarized in Table 1 above.

When determining when to give the next dose:

- Killed antigens: Count from the last **valid** dose given.
- Live antigens: Count from the last dose given, even if it is invalid.

4. Vaccine Administered at Incorrect Intervals: When vaccines are given at less than the recommended minimal intervals, it is the second dose (not the first) that is considered invalid.

5. TB Testing: MMR and varicella vaccines can interfere with the response to a tuberculin test. Tuberculin testing can be done either on the same day that these vaccines are administered or 4-6 weeks later.

B. Administration of Vaccines and Immune Globulins and Other Blood Products

I. Administration of Immune Globulins Before Live-Virus Vaccines:

Immune globulins (IG) and other antibody-containing blood products can diminish the immune response to some parenterally administered live-virus vaccines, such as MMR and its individual component vaccines, as well as varicella vaccine. Therefore, after IG and other blood products are received, these vaccines should be **deferred** for the recommended intervals as outlined in the Tables 2 and 3 below.

• **Measles-Containing and Varicella Vaccines** — The interval for revaccination or testing is product-dependent and can range from 3-11 months. Please see Table 3 below.

• **Rubella and Mumps Vaccines** — The interval for revaccination or testing is 3 months. However, vaccination of rubella-susceptible post-partum women should **not** be delayed, and they should be vaccinated at delivery. They will need to be tested for seroconversion ≥ 3 months later and revaccinated if necessary.

2. Simultaneous Administration of Immune Globulins and Live-Virus Vaccine:

If simultaneous administration is necessary because of imminent travel or exposure, the vaccine should be administered at different sites from the IG and other blood products. The individual should be revaccinated or tested for seroconversion as follows:

3. Administration of Immune Globulins After Live-Virus Vaccines:

If MMR vaccine, its individual antigens, or varicella vaccine have already been given, IG or blood products should be deferred for ≥ 2 weeks. This allows for an adequate immune response to develop.

Table 2. Guidelines for Spacing of Non-Simultaneous Administration of Vaccines and Immune Globulins and Other Blood Products

First	Second	Recommended Minimum Interval
Immune Globulin ¹	Killed Antigen	None
Killed Antigen	Immune Globulin ¹	None
Immune Globulin ¹	Live Antigen ² Measles, Varicella Mumps, Rubella	Dose-Related (See Table 3 below) 3 months
Live Antigen MMR Varicella	Immune Globulin ¹	2 weeks 2 weeks

¹ IG does **not** interfere with the immune response to killed antigens, OPV, oral typhoid, or yellow fever vaccines.

² All parenterally administered live virus vaccines should be deferred for ≥ 9 months following the administration of RSV-IGIV. No deferral is needed if RSV-IM (palivizumab) is administered.

Table 3. Suggested Intervals Between Administration of Immunoglobulin Preparations and Live Measles-Containing and Varicella Vaccines

Immune Globulin Preparations	Months Before Vaccination
TIG for tetanus prophylaxis	3
IG for hepatitis A contact prophylaxis or foreign travel	3
HBIG for hepatitis B prophylaxis	3
HRIG for rabies prophylaxis	4
VZIG for varicella prophylaxis	5
IG for measles prophylaxis (normal contact)	5
IG for measles prophylaxis (immunocompromised contact)	6
Blood transfusion (red blood cells [RBCs] washed)	0
Blood transfusion (RBCs, adenine-saline)	3
Blood transfusion (packed RBCs [Hct 65%])	5
Blood transfusion (whole blood [Hct 35% - 50%])	6
Blood transfusion (plasma/platelet products)	7
Replacement therapy for immune deficiencies	8

(Continued on next page)

Table 3. Suggested Intervals Between Administration of Immunoglobulin Preparations and Live Measles-Containing and Varicella Vaccines (continued from previous page)

Immune Globulin Preparations	Months Before Vaccination
Respiratory syncytial virus prophylaxis (RSV-IGIV)	9
Respiratory syncytial virus prophylaxis (RSV-IM)	0
Treatment of immune thrombocytopenic purpura (400 mg/kg IV)	8
Treatment of immune thrombocytopenic purpura (1000 mg/kg IV)	10
Treatment of Kawasaki disease (1,600-2,000 mg/kg IV)	11

III. Immunizations and Immunosuppressed Patients

A. Live and Killed Vaccines for Immunosuppressed Patients and Their Household Contacts

I. Immunosuppressed Patients:

Live vaccines — These vaccines may pose a risk to immune suppressed patients and generally should **not** be given. In addition, their immune response may be suboptimal.

The exceptions are:

- **Varicella vaccine** should be considered for individuals with humoral immunity, children with acute lymphoblastic leukemia in remission and non-immunosuppressed, HIV-infected children in CDC class NI or AI with an age-specific circulating CD4+ T-lymphocyte percentage of $\geq 25\%$.

- **MMR vaccine** should be given routinely to asymptomatic HIV-infected individuals without immunosuppression, and should be considered for symptomatic HIV-infected individuals without severe immunosuppression. Severe immunosuppression is defined as either: a) CD4+ T-lymphocyte counts < 750 for children ages < 12 months, < 500 for children ages 1-5 years, and < 200 for people ages ≥ 6 years; or b) when the percent of circulating CD4+ T-lymphocytes constitutes $< 15\%$ of total lymphocytes for children ages < 13 years or $< 14\%$ for persons ages ≥ 13 years.

If immunosuppressive therapy is planned:

Give live vaccines ≥ 2 weeks **before** immunosuppressive therapy or **delay** live vaccines for ≥ 3 months after immunosuppressive

therapy (the delay for steroids varies and is outlined in Table 4 below). This 3 month interval is based on the assumption that immunologic responsiveness will have been restored and any underlying disease for which the immunosuppressive therapy was given will be in control or remission.

Killed vaccines — These vaccines do not pose a risk to these patients and may be given at any time during immuno-suppressive therapy. However, immune response may be suboptimal. If possible, influenza vaccine should be given **before** flu season or $\geq 3-4$ weeks **after** therapy and granulocytes/lymphocytes are $> 1000/mm^3$.

2. Household Contacts of Immunosuppressed Patients:

Live vaccines — Household contacts should **not** receive OPV (transmission is rare but can result in clinically significant disease). They should receive IPV instead. These individuals can receive MMR (no transmission occurs) and they can receive varicella vaccine (transmission rare; disease is attenuated and can be treated with acyclovir).

Killed vaccines — These individuals can and should receive any indicated killed vaccines.

B. Steroid Therapy and Live Virus Vaccines

The potential benefits and risks of vaccination with live virus vaccines must be evaluated in each individual patient, and specific circumstances must be considered. If a patient is at increased risk of a vaccine-preventable disease, some experts advise immunization with live virus vaccines, despite steroid therapy, if the patient does not have clinical evidence of immunosuppression.

Table 4. Guidelines for Administration of Live Virus Vaccines and Steroid Therapy¹

Steroid Therapy	Recommendations for Deferral
High dose systemic steroids daily or on alternate days for ≥ 14 days ($\geq 2mg/kg$ QD or ≥ 20 mg QD of prednisone)	Defer live virus vaccines for ≥ 1 month after treatment has stopped
High dose systemic steroids daily or on alternate days for < 14 days (≥ 2 mg/kg QD or ≥ 20 mg QD prednisone)	Can give live virus vaccines immediately after treatment is discontinued. However, some experts recommend deferring until ≥ 2 weeks after treatment has stopped, if possible.
Low or moderate doses of systemic steroids given daily or on alternate days (< 2 mg/kg QD or < 20 mg QD of prednisone); or physiologic maintenance doses of steroid (replacement therapy)	Can give live virus vaccines on treatment.
Topical aerosol therapy or local injections of steroids (e.g., skin, aerosol, eyes, intra-articular, bursal, tendon injections)	Can give live virus vaccines on treatment. However, if this therapy is prolonged and there is any clinical or laboratory evidence of immunosuppression, defer for ≥ 1 month after treatment has stopped.
Individuals with a disease that in itself is considered to suppress the immune response and who are receiving systemic or locally acting steroids	Should not give live virus vaccines, except in special circumstances.

¹Steroid therapy is **not** a contraindication for administration of **killed** vaccines.

Table 5. Summary Table of Vaccine Administration

Vaccine (Type)	Route	Site and Needle Size		Major Contraindications	Major Precautions ¹
		<1 y/o	≥1 y/o		
DTaP (Toxoids and inactivated bacterial components)	IM	Anterolateral thigh 7/8" – 1" ²	Deltoid 7/8" – 2"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine or component Encephalopathy ≤7 days after previous dose of DTaP or DTP 	The following events occurring after previous dose: <ul style="list-style-type: none"> Temp. >105° F (40.5° C) ≤ 48 hrs., not attributable to another cause Collapse or shock-like state ≤48 hrs Persistent crying lasting >3 hrs., occurring ≤48 hours Convulsions, with or without fever, occurring ≤72 hrs GBS, occurring ≤6 weeks
DT/Td (Toxoids)	IM	"	"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine or component 	<ul style="list-style-type: none"> GBS occurring ≤6 weeks after previous dose
Hepatitis A (Inactivated virus)	IM	"	"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, alum, phenoxyethanol (Havrix only) or other vaccine component 	<ul style="list-style-type: none"> Pregnancy in recipient
Hepatitis B (Inactivated viral antigen)	IM	"	"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, baker's yeast, or other vaccine component 	<ul style="list-style-type: none"> Vaccination of preterm infants born to HBsAg-negative mothers and weighing <2 kg at birth should be delayed until just before hospital discharge, if weight ≥2 kg
Hib (Polysaccharide-protein conjugate)	IM	"	"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine or component 	
Influenza (Inactivated virus or virus components)	IM	"	"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, eggs, or other vaccine component 	<ul style="list-style-type: none"> GBS occurring ≤ 6 weeks after previous dose 1st trimester pregnancy
IPV (Inactivated virus)	IM SC	"	Deltoid 7/8" - 2" or Upper arm 5/8" - 3/4"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, streptomycin, neomycin, polymyxin B, or other vaccine component. 	<ul style="list-style-type: none"> Pregnancy in recipient
MMR (Live virus)	SC	NA ³	Upper arm 5/8" - 3/4"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, neomycin, gelatin, or other vaccine component Pregnancy in recipient Immunosuppression (except for asymptomatic HIV-infected individuals without severe immunosuppression)⁴ 	<ul style="list-style-type: none"> History of thrombocytopenia or thrombocytopenic purpura Previous receipt of IG or other blood products, within 3-11 months (See Table 3) Previous receipt of RSV-IGIV ≤9 months
Pneumococcal Conjugate PCV7 (Polysaccharide protein conjugate)	IM	Anterolateral thigh 7/8" – 1" ²	Deltoid 7/8" - 2"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine or component 	
Pneumococcal Polysaccharide PPV23 (Polysaccharide)	IM SC	NA ³	Deltoid 7/8"-2" or Upper arm 5/8"-3/4"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine or component 	<ul style="list-style-type: none"> Pregnancy in recipient
Varicella (Live virus)	SC	NA ³	Upper arm 5/8" - 3/4"	<ul style="list-style-type: none"> Anaphylactic reaction to vaccine, gelatin, neomycin, or other vaccine component Immunosuppression, except for individuals with impaired humoral immunity, children with acute lymphoblastic leukemia in remission, and asymptomatic, nonimmunosuppressed, HIV-infected children in CDC class N1 (no signs or symptoms); or class A1 (mild signs or symptoms), with an age-specific circulating CD4+ T-lymphocyte percentage of ≥25% Pregnancy in recipient 	<ul style="list-style-type: none"> Previous receipt of IG or other blood products within 3-11 months (See Table 3) Previous receipt of RSV-IGIV ≤9 months

¹ Events or conditions listed as precautions, although not contraindications, should be carefully reviewed. The benefits and risks of administering a specific vaccine to an individual should be considered. A moderate or severe illness with or without fever is a temporary precaution and the vaccine may be postponed until the illness has resolved.

² For very young, small infants **only**, a 5/8" needle may be adequate.

³ MMR and varicella not approved for use in children <1 year of age; PPV23 not approved for children <2 years of age.

⁴ Severe immunosuppression is defined as either: a) CD4+ T-lymphocyte counts <750 for children ages <12 months, <500 for children ages 1-5 years, and <200 for people age ≥6 years; or b) when percent of circulating CD4+ T-lymphocytes constitutes <15% of total lymphocytes for children ages <13 years or <14% for persons ages ≥13 years.

Kids Need Milk More Often

Incorporating 3 servings of milk and Milk Group foods into children's diets each day may help prevent the risk of rickets, low bone mass and even obesity.

Clue kids into calcium...

- Serve flavored milk instead of soda.
- Prepare instant cereals, soups or hot chocolate with milk instead of water.
- Create a fruit parfait - yogurt topped with fruit and granola.
- Cheese sticks, cubes, and slices make for an easy snack for kids on the go.

The American Academy of Pediatrics® urges kids to choose milk, yogurt and cheese for the calcium they need.

www.nationaldairyCouncil.org



NATIONAL DAIRY COUNCIL

MilkPEP
Milk Promotion Education Program

The National Dairy Council® was founded in 1915 and conducts nutrition education and nutrition research programs through national, state and regional Dairy Council organizations, on behalf of America's dairy farmers.

For more information or to obtain free patient education materials, visit www.nationaldairyCouncil.org



AMERICAN BOARD OF PEDIATRICS RECERTIFICATION EXAM CHANGES

The pediatric board exam is scheduled to change from a home-based computerized exam to a test center-based, proctored exam in 2003.

Please check any and all points that apply and fax to David Chung, MD, at (508) 584-0230.

Alternatively, you can e-mail your opinion to david@beansprout.net

In my opinion:

**Strongly
Agree**

**Strongly
Disagree**

Changing to a test center-based exam will increase public confidence in the board recertification process.

1 2 3 4 5

Proper identification of testing participants is important in the recertification process.

1 2 3 4 5

Proper identification of testing participants in 2003 will be accurate in a test center-based examination.

1 2 3 4 5

Proper identification of testing participants in 2003 will be accurate in a home-based examination.

1 2 3 4 5

Taking the recertification test in a test center-based exam is convenient for me.

1 2 3 4 5

Taking the recertification test in a home-based exam is convenient for me.

1 2 3 4 5

Switching to a test center-based exam will not be any more expensive than a home-based exam.

1 2 3 4 5

The learning experience from a test center-based exam will be as or more fulfilling than a home-based exam.

1 2 3 4 5

I am board certified but am considering not taking the exam because of the change in testing format.

1 2 3 4 5

I am not board certified but am considering taking the exam because of the change in testing format.

1 2 3 4 5

Other comments: _____

Optional

Name: _____

Address: _____

City, State, ZIP: _____

MCAAP and MIAP Recognized for Immunization Excellence

The MCAAP Joint Committee on Adolescent Hepatitis B and the Massachusetts Immunization Action Partnership were presented the "Coalition/Partnership Award" from the National Partnership for Immunization (NPI) for their efforts to vaccinate Massachusetts students in grades 6 through 12 against hepatitis B. More than 350 Massachusetts schools implemented the program in school year 1998-1999, and an additional 198 schools started the program in 1999-2000. As a result, the Massachusetts immunization coverage rate for hepatitis B among adolescents increased from 29.9% in 1996 to 81.1% in 2000 and is now at an all-time high.



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The Forum

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EDITOR: David Chung, MD

DESIGNER: Lisa Salvo

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