

VACCINE STANDING ORDERS

VACCINE	BRAND NAME	DATE LICENSED	COMPANY
IPV	IPOL	12-01-90	Sanofi Pasteur
DTaP	Tripedia	07-31-96	Sanofi Pasteur
DTaP	Daptacel	05-14-02	Sanofi Pasteur
DTaP	Infanrix	01-29-97	GlaxoSmithKline
DTaP-HepB-IPV	Pediarix	12-20-02	GlaxoSmithKline
DTaP-IPV-Hib	Pentacel	06-01-08	Sanofi Pasteur
DTaP-IPV	Kinrix	06-24-08	GlaxoSmithKline
DTaP-Hib	Trihibit	09-27-96	Sanofi Pasteur
DT	DT	09-18-84	Sanofi Pasteur
Td	Td	01-03-78	Sanofi Pasteur
Tdap	Boostrix	05-17-05	GlaxoSmithKline
Tdap	ADACEL	06-10-05	Sanofi Pasteur
Hepatitis B	Engerix-B	08-28-89	GlaxoSmithKline
Hepatitis B	Recombivax HB	07-23-86	Merck
Hib-HepB	Comvax	10-02-96	Merck
Hib	ACTHib	03-30-93	Sanofi Pasteur
Hib	PedvaxHIB	12-20-89	Merck
Hib	HIBERIX	08-19-09	GlaxoSmithKline
Hepatitis A	Havrix	02-22-95	GlaxoSmithKline
Hepatitis A	Vaqa	03-29-96	Merck
MMR	MMR II	04-22-71	Merck
Varicella	Varivax	03-17-95	Merck
MMRV	ProQuad	09-06-05	Merck
PCV13	Prevnar	02-01-00	Wyeth
MCV4	Menactra	01-14-05	Sanofi Pasteur
MCV4	Menveo	04-14-10	Novartis
Rotavirus	RotaTeq (RV5)	02-03-06	Merck
Rotavirus	Rotarix (RV1)	04-03-08	GlaxoSmithKline
(HPV) Human Papillomavirus	Gardasil	06-08-06	Merck
(HPV) Human Papillomavirus	Cervarix	04-14-10	GlaxoSmithKline
Influenza	FluMist	06-17-03	MedImmune
Influenza	Fluzone	12-09-99	Sanofi Pasteur
Influenza	Fluvirin	09-14-05	Novartis

VACCINE ADMINISTRATION

- The recommendations on route, site, and dosages of immunobiologics are derived from theoretical considerations, experimental trials, and clinical experience. The Advisory Committee on Immunization Practices (ACIP) **strongly discourages** any variations from the recommended route, site, volume, or number of doses of any vaccine.
- For all intramuscular (IM) injections, the needle should be long enough to reach the muscle mass and prevent vaccine from seeping into subcutaneous tissue. An individual decision on needle size and site of injection must be made for each person based on **age**, the **volume** of the material to be administered, the **size of the muscle**, and the **depth below the muscle surface** into which the material is to be injected.
- Subcutaneous (SQ) injections are usually administered into the thigh of infants and in the deltoid area of older children and adults. A 5/8 to 3/4 inch, 23 to 25 gauge needle should be inserted into the tissues below the dermal layer of the skin.
- The anterolateral aspect of the thigh is the recommended site for intramuscular injections of infants.
- The deltoid may be used for intramuscular injections of toddlers (**if the muscle mass is adequate**), and older children.

Source: Centers for Disease Control and Prevention. General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1994;43 (No. RR-1): 6-8.

Kansas Immunization Program/Recommendations for IM/SQ Injections

AGE	ROUTE	SITE	NEEDLE GAUGE	NEEDLE LENGTH
Infants	IM	Thigh	22-25	7/8-1 inch
	SQ	Thigh	23-25	5/8-3/4 inch
Toddlers	IM	Thigh	22-25	7/8-1 1/4 inches
	SQ	Deltoid	23-25	5/8-3/4 inch
Older Children	IM	Deltoid	22-25	7/8-1 1/4 inches
	SQ	Deltoid	23-25	5/8-3/4 inch
Adults	IM	Deltoid	20-25	1-1 1/2 inches
	SQ	Deltoid	23-25	5/8-3/4 inch

Inactivated Poliomyelitis Vaccine (IPV)

Manufacturer Sanofi Pasteur

Brand Name IPOL

Formulation - 10-dose vial

Dosage - 0.5ml

Storage - Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.

Injection Site -	Anterolateral thigh or Upper arm	Anterolateral thigh or deltoid
Route -	Subcutaneous (SC)	Intramuscular (IM)
Needle Size -	23 to 25 gauge, 3/8 inch	22 to 25 gauge, 1-1.5 inches

Administration: Simultaneously or at any interval between doses of an inactivated or live antigen.

Recommended IPV schedule

Dose 1 - 2 months

Dose 2 - 4 months

Dose 3 - 6-18 months

Dose 4 - 4-6 years

Minimum Interval Schedule:*

Dose 1 - 6 wks

Dose 2 - 4wks after Dose 1

Dose 3 - 4wks after Dose 2

Dose 4- 6months after Dose 3 and \geq 4yrs of age **

Dose 5 -6 months after Dose 4, if needed

* The use of the minimum age (6wks) and intervals between the first three doses (4wks) should only be used if:

1. Mass vaccination campaigns to control outbreaks of paralytic polio.
 2. Unvaccinated children who will be traveling in <4weeks to areas where polio is endemic or epidemic.
- ACIP recommends this precaution because shorter intervals and earlier start date lead to lower seroconversion rates.

** *The final dose in the IPV series should be administered at age \geq 4 years regardless of the number of previous doses.*

Reference: MMWR August 7, 2009 / 58(30);829-830

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5830a3.htm?s_cid=mm5830a3_e

Contraindications to IPV vaccination:

1. Anaphylactic reaction to a previous dose of IPV
2. Hypersensitivity to any component of the vaccine, including 2-phenoxyethanol, formaldehyde, neomycin, streptomycin and polymyxin B.

Precaution to IPV vaccination:

1. Moderate or severe acute illness

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)

Manufacturer	Sanofi Pasteur
Brand Name	Tripedia
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Detailed schedule for Tripedia vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

*If any of the first four doses were a DTP, any licensed DTaP vaccine may be administered for the fifth dose.

Contraindications to DTaP vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP vaccination:

1. Temperature equal to or greater than 40.5° C (105° F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

DAPTACEL®
Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine
DTaP

Manufacturer	Sanofi Pasteur
Brand Name	DAPTACEL®
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 1 -1.5 inch
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Schedule for DAPTACEL vaccination of children:

Dose	Customary Age	Minimum Interval
Dose 1	2 months	6 weeks or older
Dose 2	4 months	4 weeks after first dose
Dose 3	6 months	4 weeks after second dose
Dose 4	15-18 months	6 months after third dose*
Dose 5	4-6 years	6 months after the fourth dose

The fifth dose is not necessary if the fourth dose was administered on or after the 4th birthday.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

DTaP series should be completed with the same brand of vaccine if possible however there is limited data that suggests that DTaP interchangeability with other DTaP brands does not adversely affect the safety and immunogenicity of the vaccine.

Contraindications to DTaP vaccination:

1. Severe allergic reaction (anaphylactic) to a vaccine component in DAPTACEL® or following prior dose of vaccine.
2. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.

Precautions to DTaP vaccination:

1. Moderate to severe illness, if vaccination is deferred vaccinate when condition improves
2. Temperature equal to or greater than 40.5° C (105° F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
3. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
4. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.

5. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
6. Evolving neurologic disorder (e.g. uncontrolled epilepsy, infantile spasms, and progressive encephalopathy) a history of seizures that has not been evaluated, or a neurologic event that occurs between doses of pertussis vaccine

Reference: Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Atkinson W, Wolfe S, Hamborsky J, McIntyre L, eds. 11th ed. Washington DC: Public Health Foundation, 2009

<http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/pert.pdf>

U.S FDA Licenses DAPTACEL® Vaccine for the Fifth Consecutive Dose in the Pediatric DTaP Immunization Series/Sanofi Pasteur

Rev. 09/17/09

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)

Manufacturer	GlaxcoSmithKline
Brand Name	Infanrix
Formulation	10 1-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for DTaP vaccination for children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

* **May use different brand if necessary to complete the series.** No efficacy or safety data available to this schedule.

*If any of the first four doses were a DTP, any licensed DTaP vaccine may be administered for the fifth dose.

Contraindications to DTaP vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP/DTaP vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP vaccination:

1. Temperature equal to or greater than 40.5° C (105° F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

**Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)
Hepatitis B Vaccine, Recombinant (HepB)
Inactivated Poliomyelitis Vaccine (EIPV)**

Manufacturer	GlaxoSmithKline
Brand Name	PEDIARIX
Formulation	5 one-dose vials Single dose Tip-Lok syringe (no needle)
Dosage	0.5 ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses of inactivated or live antigen.

Routine DTaP/HepB/EIPV Combination schedule for vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	8 weeks after second dose

1. PEDIARIX is interchangeable with all US-licensed **EIPV** and **HepB** vaccines

2. PEDIARIX is indicated to complete the first 3 doses of the primary series in infants who started the series with *Infanrix*.

3. Because the pertussis antigen components of PEDIARIX are the same as those in INFANRIX, these children should receive INFANRIX as their fourth and fifth dose of DTaP.

4. However, if previously administered DTaP vaccine cannot be determined or is not available, any licensed DTaP vaccine may be used to complete the series. No efficacy or safety data is available for this schedule.

5. A birth dose of monovalent hepatitis B vaccine remains a part of the infant immunization schedule when PEDIARIX is used. Although not labeled for this indication by FDA, PEDIARIX may be used in infants whose mothers are HBsAg positive or whose HBsAg status is not known.

6. Children who have received a 3-dose primary series of PEDIARIX should receive a fourth dose of EIPV at 4 to 6 years of age.

7. PEDIARIX may be administered at 2, 4, and 6 months to infants who received a birth dose of hepatitis B vaccine (total of 4 doses of hepatitis B vaccine)

Contraindications to DTaP/HepB/EIPV Combination vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following a prior dose of vaccine
3. Hypersensitivity to yeast, neomycin or polymyxin B
4. Encephalopathy, not due to another cause, occurring within 7 days following a DTP/DTaP vaccination.

Precautions to DTaP/HepB/EIPV Combination vaccination:

1. Fever equal to or greater than 40.5° C (105° F) within 48 hours of previous DTP/DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.
5. Progressive or evolving neurologic disorder.

**Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DAPTACEL)
Inactivated Poliomyelitis Vaccine (IPOL)
Haemophilus b Conjugate Vaccine (ActHib)**

Manufacturer Sanofi Pasteur

Brand Name PENTACEL®

Formulation 5 one-dose vials of DTaP/IPV to be used to reconstitute 5 one dose vials of ActHib

Dosage 0.5 ml

Storage Refrigerate immediately. Store at 2°-8° C (35°-46° F). **Do not freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 22 to 25 gauge, 7/8 to 1 inches

Administration May be administered simultaneously or at any interval between doses of inactivated or live antigen.

Pentacel® vaccine is indicated for children 6 weeks through 4 years of age

Recommended Schedule:

Dose 1- 2 months **Dose 2** -4 months **Dose 3-** 6 months **Dose 4-** 15-18 months

Minimum Interval:

Dose 1- 6 weeks **Dose 2-** 4 weeks after first dose **Dose 3-** 4 weeks after second dose

Dose 4- 6 months after third dose and no earlier than 12 months of age

If the primary series has been started with single- antigen vaccines of DTaP, IPV or Hib the series can be completed with PENTACEL®.

Note if the clinic is using both Pediarix (DTaP/IPV/HepB) and Pentacel® (DTaP/IPV/Hib) combination vaccines are overlapping in DTaP and IPV, but Pediarix contains HepB and not Hib. Pentacel contains Hib and not Hep B.

Contraindications to DTaP-IPV/Hib Combination vaccination:

1. Anaphylactic reaction following a prior dose of PENTACEL® or any antigens contained in PENTACEL® vaccine
2. Encephalopathy, not due to another cause, occurring within 7 days following a pertussis containing vaccine
3. Progressive neurologic disorder, including infantile spasm, uncontrolled epilepsy, progressive encephalopathy.

Continued

**Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DAPTCEL)
Inactivated Poliomyelitis Vaccine (IPOL)
Haemophilus b Conjugate Vaccine (ActHib)
PENTACEL®**

Precautions if the following events occurred 48 hours after receiving pertussis vaccine:

1. Fever equal to or greater than 40.5° C (105° F) within 48 hours of previous DTaP vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of previous DTP/DTaP vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP/DTaP vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP/DTaP vaccination.

Precaution if the following event occurred 6 weeks after receipt of a tetanus toxoid vaccine

1. Guillain-Barre' syndrome

**Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP)
Inactivated Poliovirus Vaccine (IPV)**

Manufacturer	GlaxoSmithKline
Brand Name	Kinrix™
Formulation	10 1-dose vials or 5 prefilled TIP-LOK syringes
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (36°-46° F). Do not freeze.
Injection Site	Deltoid muscle of the upper arm
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for DTaP vaccination for children:

Dose	Customary Age	Indication
1	4-6 Years (up to 7 th Birthday)	5 th dose of DTaP and 4 th dose of IPV

1. Kinrix™ is indicated for the **5th dose of DTaP and 4th dose of IPV** in children whose previous DTaP doses have been Infanrix® and/or Pediarix®
2. **If necessary, any available DTaP vaccine may be used to complete the series.** No efficacy or safety data available to this schedule.
3. If any of the first four doses were a DTP, any licensed DTaP vaccine should be administered for the fifth dose.

*** Contraindications to DTaP vaccination:**

1. Anaphylaxis after a previous dose of any diphtheria toxoid, tetanus toxoid, pertussis or poliovirus-containing vaccine, or to any component of Kinrix™ including neomycin and polymyxin B.
2. Encephalopathy within 7 days of administration of a previous pertussis-containing vaccine
3. Progressive neurologic disorders.

Precautions to DTaP vaccination:

1. If any of the following events occurred within 48 hours following a pertussis-containing vaccine, the decision to give KINRIX™ should be based on potential benefits and risks.
 - Temperature $\geq 40.5^{\circ}$ C (105° F), collapse or shock-like state
 - Inconsolable crying lasting ≥ 3 hours
2. If Guillain-Barre´ syndrome occurs within 6 weeks of a prior vaccine containing tetanus toxoid, the decision to give KINRIX™ should be based on potential benefits and risks.
3. For children at higher risk for seizures, an antipyretic may be administered at the time of vaccination.
4. The needleless prefilled syringes contain dry natural latex rubber and may cause allergic reaction.

Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine (DTaP) Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Sanofi Pasteur
Brand Name	Trihibit
Formulation	5 vials of ACT-Hib (1 dose each) and 5 vials of Tripedia (1 dose each) ACT-Hib must be reconstituted with 0.6ml of Tripedia
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Detailed schedule for Trihibit vaccination of children:

Dose	Customary Age	Minimum Interval
4*	15-18 months	6 months after third dose

*Trihibit is **only** licensed for the 4th dose of the primary vaccinating series for children 15-59 months of age.

*The 4th dose of DTaP may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

Contraindications to DTaP-Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of the vaccine.
3. Encephalopathy, not due to another cause, occurring within 7 days following DTP, DTaP, or DTaP-Hib vaccination.
4. Anaphylactic reaction to thimerosal.

Precautions to DTaP-Hib vaccination:

1. Temperature equal to or greater than 40.5° C (105° F) within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination not due to another identifiable cause.
2. Collapse or shock-like state (hypotonic-hypo-responsive episode) within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination.
3. Persistent, inconsolable crying lasting more than 3 hours, occurring within 48 hours of previous DTP, DTaP, or DTaP-Hib vaccination.
4. Convulsions with or without fever occurring within 3 days of previous DTP, DTaP, or DTaP-Hib vaccination.
5. Progressive or evolving neurologic disorder.

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Diphtheria Toxoid-Tetanus Toxoid (DT) Pediatric Formulation

Manufacturer	Sanofi Pasteur
Brand Name	DT
Formulation	10-dose vial
Dosage	0.5ml
Storage	Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge , 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for DT vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	4 weeks after first dose
3	6 months	4 weeks after second dose
4*	15-18 months	6 months after third dose
5	4-6 years	6 months after the fourth dose. The fifth dose is not necessary if the fourth dose is administered on or after the 4th birthday.

*The 4th dose of DT may be administered as early as 12 months of age, provided 6 months have elapsed since the 3rd dose, and if the child is considered unlikely to return at 15-18 months of age.

Note: DTaP is the vaccine preferred for primary immunization of infants and children up to 7 years of age. If there is a true medical contraindication to pertussis vaccine, DT should be used.

Contraindications to DT vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Persons 7 years of age and older should **not** be immunized with DT.

Rev. 9/01

Diphtheria Toxoid-Tetanus Toxoid (Td) Adult Formulation

Manufacturer	Sanofi Pasteur
Brand Name	Td
Formulation	Single-dose syringe and/or single-dose vial
Dosage	0.5 ml
Storage	Store at 2-8° C (35-46° F). Do not freeze.
Injection Site	Anterolateral aspect of upper thigh or deltoid.
Route	Intramuscular (IM)
Needle Size	20 to 25 gauge, 1 to 1½ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for Td vaccination of adults and children 7 years of age and older:

Dose	Minimum Interval
1	7 years of age and older
2	4 weeks after first dose
3	6 months after second dose
Booster	Repeat every 10 years or at 11-12 year-old assessment as recommended by ACIP

Contraindications to Td vaccination:

1. Moderate to severe febrile illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine.
3. Only persons 7 years of age and older should be immunized with Td. DTaP is the vaccine recommended for children 6 weeks through 6 years of age up to 7 years of age.

**Tetanus Toxoid, Reduced Diphtheria Toxoid and
Acellular Pertussis Vaccine
Tdap**

Manufacturer: GlaxoSmithKline

Brand Name: Boostrix®

Formulation: Single dose vials and disposable prefilled TIP-LOK syringes

Dosage: 0.5ml

Storage: Store at 2-8°C (35-46°F). **Do not freeze.**

Injection Site: Deltoid

Route: Intramuscular (IM)

Needle Size: 20 to 25 gauge, 1 to 1½ inch needle

Administration: Boostrix® vaccine **must not** be mixed with any vaccine in the same syringe.

Indications: Boostrix® is indicated for active booster immunization for the prevention of tetanus, diphtheria and pertussis as a single dose in individual's age 10-64 years. Not recommended for treatment of actual disease.

Schedule: **Five years should elapse between the last dose of DTaP or Td vaccine and the administration of Boostrix®.** There is no data to support repeat administration of Boostrix®.

Contraindications:

- 1.) A known hypersensitivity to any component of tetanus toxoid, diphtheria toxoid or pertussis-containing vaccine reaction after previous administration of a vaccine containing similar components.
- 2.) Encephalopathy within 7 days of administration of a previous dose of a pertussis-containing vaccine. If a decision is made to withhold pertussis vaccine, immunization with Td should be given.

Warnings and Precautions:

- 1.) Progressive neurologic disorder or uncontrolled epilepsy.
- 2.) Guillain-Barre' occurred within 6 weeks following a prior dose of tetanus toxoid
3. Experienced an Arthus-type hypersensitivity reaction following a prior dose of tetanus toxoid
- 4.) The needleless prefilled syringes contain dry natural rubber latex that may cause allergic reaction in latex sensitive individuals. The vial stopper is latex-free.
- 5.) Safety and effectiveness has not been established in pregnant women, nursing mothers, and children younger than 10 years of age

References: Boostrix® vaccine package insert, GlaxoSmithKline, (12/2008).

**Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine – Tdap
(Preservative Free)**

Manufacturer:	Sanofi Pasteur Inc.
Brand Name:	ADACEL TM
Formulation:	Single dose vials
Dosage:	0.5 ml
Storage:	Store at 2°-8° C (35°-46° F) Do not freeze
Injection Site:	Deltoid
Route:	Intramuscular (IM)
Needle Size:	20 to 25 gauge, 1 to 1½ inch needle
Administration:	ADACEL vaccine must not be mixed with any vaccine in the same syringe
Indications:	ADACEL vaccine is indicated for active booster immunization for the prevention of tetanus, diphtheria and pertussis as a single dose in persons 11 through 64 years of age. Not recommended for treatment of actual disease.
Schedule:	Five years should elapse between the last dose of DTaP vaccine and administration of ADACEL. There are no data to support repeat administration of ADACEL
Contraindications:	<ol style="list-style-type: none">1. A known hypersensitivity to any component of tetanus toxoid, diphtheria toxoid or pertussis-containing vaccine or a life-threatening reaction after previous administration of a vaccine containing similar components.2. Encephalopathy not attributable to another identifiable cause within 7 days of administration of a previous dose.3. Progressive neurological disorder, uncontrolled epilepsy or progressive encephalopathy4. When a decision is made to withhold pertussis vaccine, Td vaccine should be given.
Reference:	ADACEL vaccine package insert, Sanofi Pasteur Inc. (June 2005)

Rev. 6/05

Hepatitis B Vaccine (Recombinant)

Manufacturer GlaxcoSmithKline
Brand Name Engerix-B
Formulation/Dosage: 10 one-dose vials

Patient age and status	Pediatric Formulation (Blue Cap) 10mcg/0.5ml	Adult Formulation (Orange Cap) 20mcg/1.0ml
Infant born to HBsAg Positive woman*	10mcg/0.5ml	
Infant born to HBsAg Negative woman	10mcg/0.5ml	
1-10 years of age	10mcg/0.5ml	
11-19 years of age	10mcg/0.5ml	10mcg/0.5 ml
Adult ≥ 20 years of age		20mcg/1.0ml

Storage Refrigerate immediately. Store at 2°-8° C (35°-46° F). **Do not freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 20 to 25 gauge, 7/8 to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen. **Hepatitis B vaccines made by different manufacturers are interchangeable, except for the 2-dose schedule for adolescents aged 11-15 years.**

Routine schedule for Hepatitis B vaccination of children:

Dose	HBsAg Positive woman**	HBsAg Negative woman***	Minimum Interval
1	Birth	Birth-2 months	Initial visit
2	1-2 months	1-4 months	1 month after first dose
3	6 months	6-18 months	2 months after second dose and 4 months after first dose and no earlier than 6 months of age

* HBIG given simultaneously at a different site within 12 hours of birth.

**If mother is HBsAg positive, administer hepatitis B vaccine regardless of infant's weight.

***If mother is HBsAg negative, infant must weigh at least 2000 grams or 4.4 pounds.

Contraindications to Hepatitis B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

Hepatitis B Vaccine (Recombinant)

Manufacturer Merck
Brand Name Recombivax HB
Formulation/Dosage: 10 one-dose vials

Patient age and status	Pediatric/ Adolescent Formulation (Yellow Cap) 5mcg/0.5ml	Adult Formulation (Green Cap) 10mcg/1.0ml
Infant born to HBsAg Positive woman*	5mcg/0.5ml	5 mcg/0.5 ml
Infant born to HBsAg Negative woman	5mcg/0.5ml	5 mcg/0.5 ml
1-10 years of age	5mcg/0.5ml	5 mcg/0.5 ml
11-19 years of age	5mcg/0.5ml	5 mcg/0.5 ml
Adult ≥ 20 years of age	10mcg/1.0ml	10mcg/1.0ml

Note: If the suggested formulation is not available, the appropriate dose can be achieved from another formulation, provided the total volume of vaccine does not exceed 1.0ml.

Storage Refrigerate immediately. Store at 2°-8° C (35°-46° F). **Do not freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 20 to 25 gauge, 7/8 to 1½ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.
Hepatitis B vaccines made by different companies are interchangeable, except for the 2-dose schedule for adolescents aged 11-15 years.

Routine schedule for Hepatitis B vaccination of children:

Dose	HBsAg Positive woman**	HBsAg Negative woman***	Minimum Interval
1	Birth	Birth-2 months	Initial visit
2	1-2 months	1-4 months	1 month after first dose
3	6 months	6-18 months	2 months after second dose and 4 months after first dose and no earlier than 6 months of age

* HBIG given simultaneously at a different site within 12 hours of birth.

**If mother is HBsAg positive, administer hepatitis B vaccine regardless of infant's weight.

***If mother is HBsAg negative, infant must weigh at least 2000 grams or 4.4 pounds.

Contraindications to Hepatitis B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

**Haemophilus Influenzae type B Vaccine (Hib)
Hepatitis B Vaccine (Recombinant)**

Manufacturer	Merck
Brand Name	Comvax
Formulation	10 one-dose vials
Dosage	0.5 ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1¼ inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for Hib-Hep B combination:*

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks of age or older
2	4 months	1 month after first dose
3	12-15 months	12 months of age

A birth dose of monovalent hepatitis B vaccine remains a part of the infant immunization schedule when COMVAX is used

Contraindications to Hib-Hep B vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Anaphylactic reaction to baker's yeast.

Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Sanofi Pasteur
Brand Name	ACT-Hib
Formulation	5 vials of ACT-Hib (1 dose each) and 5 vials of 0.4% Sodium Chloride (1 dose each) ACT-Hib must be reconstituted with 0.6ml of Sodium Chloride
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1 1/4 inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for ACT-Hib vaccination of children:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	1 month after first dose
3	6 months	1 month after second dose
Booster*	12-15 months	2 months after third dose and no earlier than 12 months of age

*Any Hib conjugate vaccine may be used as the booster dose after a primary series. When possible, the Hib conjugate vaccine used at the first vaccination should be used for all subsequent vaccinations in the primary series. However, any combination of three doses of Hib conjugate vaccines licensed for use among infants will provide adequate protection.

Detailed schedule for Hib vaccination of children:

Age at 1st dose	Primary series	Booster
2-6 months	3 doses, 2 months apart	12-15 months
7-11 months	2 doses, 2 months apart	12-18 months
12-14 months	2 doses, 2 months apart	-----
15-59 months	1 dose	-----

Contraindications to Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine

Haemophilus Influenzae type B Vaccine (Hib)

Manufacturer	Merck
Brand Name	PedvaxHIB (PRP-OMP)
Formulation	10 one-dose vials
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 7/8 to 1 1/4 inches
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Routine schedule for PedvaxHIB vaccination:

Dose	Customary Age	Minimum Interval
1	2 months	6 weeks or older
2	4 months	1 month after first dose
Booster*	12-15 months	2 months after second dose and no earlier than 12 months of age

*Any Hib conjugate vaccine may be used as the booster dose after a primary series. When possible, the Hib conjugate vaccine used at the first vaccination should be used for all subsequent vaccinations in the primary series. However, any combination of three doses of Hib conjugate vaccines licensed for use among infants will provide adequate protection.

Detailed schedule for Hib vaccination of children:

Age at 1st dose	Primary series	Booster
2-6 months	2 doses, 2 months apart	12-15 months
7-11 months	2 doses, 2 months apart	12-18 months
12-14 months	2 doses, 2 months apart	-----
15-59 months	1 dose	-----

Contraindications to Hib vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine

HIBERIX®
Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate)
HIB (Booster dose)

Manufacturer	GlaxoSmithKline
Brand Name	HIBERIX®
Formulation	Single dose vials of lyophilized vaccine to be reconstituted only with the accompanying saline diluent in prefilled TIP-Lok® syringe
Dose	0.5-ml
Storage	Refrigerate immediately. Store at 2°-4°C or 35°-46°F Do Not Freeze vaccine or diluent
Injection Site	Anterolateral aspect of the upper thigh or deltoid
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 1-1.5 in length
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen vaccines. Hiberix® should not be mixed in the same syringe with any other vaccine.

Schedule for Hiberix®

Hiberix® is licensed for use as the booster (final) dose for Hib vaccination for children aged 15 months through 4 years (before the 5th birthday) who have received a primary Hib vaccination series of 2 or 3 doses (depending on the formulation of the primary series vaccines). ACIP recommends Hib booster dosing at ages 12 through 15 months. To facilitate timely booster vaccination, Hiberix® and other Hib conjugate vaccines can be administered as early as age 12 months, in accordance with Hib vaccination schedules for routine and catch-up immunization. Hiberix® is not licensed for the primary Hib vaccination series; however, if Hiberix® is administered inadvertently during the primary vaccination series, the dose should be counted as a valid PRP-T dose that does not need to be repeated if it was administered according to schedule. In these children, a total of 3 doses will complete the routine primary series.

Contraindications to Hiberix®

1. Severe allergic reaction (anaphylaxis) after a previous dose of any *H.influenzae type b* or tetanus toxoid containing vaccine or any component of the vaccine

Precautions to Hiberix®

1. Guillain-Barre' Syndrome has occurred within 6 weeks of receipt of a prior vaccine containing tetanus toxoid should be based on careful consideration of the potential benefits and possible risks

Reference: Hiberix ® (Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate) prescribing information, GlaxoSmithKline Kline Biologicals, Rixnsart, Belgium, US License 1616, FDA approved August 19, 2009. CDC. Updated recommendations for use of *Haemophilus influenzae type b* (Hib) vaccine: reinstatement of the booster dose at ages 12-15 months. MMWR 2009; 58:673--4

Hepatitis A Vaccine (Inactivated)

Manufacturer	GlaxoSmithKline		
Brand Name	Havrix		
Formulation	Children & Adolescents (Red Cap)-0.5ml contains 720 EI.U. Adult Formulation (Purple Cap)-1.0ml contains 1440 EI.U.		
Dosage	Group	Dose	Formulation
	12 months-18 year	720EI.U./0.5ml	Children/Adolescents
	19 years & older	1440EI.U./1.0ml	Adults
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.		
Injection Site	Deltoid		
Route	Intramuscular (IM)		
Needle Size	20 to 25 gauge, 7/8 to 1½ inches		
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.		

Routine schedule for Havrix vaccination:

ONE dose of 720 EI.U. in 0.5ml given to children 12 months and older. Booster dose given 6-12 months after the primary dose.

ONE dose of 1440 EI.U. in 1.0ml given to adults. Booster dose given 6-12 months after the primary dose.

Contraindications to Hepatitis A vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine
3. Anaphylactic reaction to yeast

Hepatitis A Vaccine (Inactivated)

Manufacturer	Merck		
Brand Name	VAQTA		
Formulation	Children & Adolescents (Purple Cap) -0.5ml contains 25 U Adult Formulation (Orange Cap) -1.0ml contains 50 U		
Dosage	Group	Dose	Formulation
	12 months-18 years	25U/0.5ml	Children/Adolescents
	19 years & older	50U/1.0ml	Adults
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F). Do not freeze.		
Injection Site	Deltoid		
Route	Intramuscular (IM)		
Needle Size	20 to 25 gauge, 7/8 to 1½ inches		
Administration	May be administered simultaneously or at any interval between doses with inactivated or live antigen.		

Routine schedule for VAQTA vaccination:

ONE dose containing 25 U in 0.5ml given to children 12 months-18 years.
Booster dose containing 25 U in 0.5 ml given 6-18 months after the primary dose.

ONE dose of 50 U in 1.0ml given to adults. Booster dose given 6-12 months after the primary dose.

Contraindications to Hepatitis A vaccination:

1. Moderate to severe illness (i.e. child appears ill)
2. Anaphylactic reaction following prior dose of vaccine
3. Anaphylactic reaction to yeast

Measles-Mumps-Rubella Vaccine (MMR-Live)

Manufacturer	Merck
Brand Name	MMR II
Formulation	10 one-dose vials which must be reconstituted with 0.7ml of diluent
Dosage	0.5ml
Storage	Refrigerate immediately. Store at 2°-8° C (35°-46° F) or at freezer temperature. Protect from light at all times , since such exposure may inactivate the virus. Diluent may be stored at 15°-30° C (59°-86° F) room temperature. Do not freeze.
Injection Site	Deltoid
Route	Subcutaneous (SC)
Needle Size	23 to 25 gauge, $\frac{5}{8}$ to $\frac{3}{4}$ inch
Administration	May be administered simultaneously or at any interval between doses containing inactivated antigens. Must have at least a 4 week interval if not administered simultaneously with Varicella vaccine.

Routine schedule for MMR vaccination of children:

Dose	Customary Age	Minimum Interval
1	12-15 months	After 12 months of age
2	4-6 years	1 month after first dose

Contraindications to MMR vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Immunosuppression*
4. Pregnancy
5. Receipt of antibody-containing blood products
6. Anaphylactic reaction to neomycin

*MMR should be considered for asymptomatic HIV patients.

Varicella Virus Vaccine (Live)

Manufacturer	Merck
Brand Name	Varivax
Formulation	10 one-dose vials which must be reconstituted with 0.7ml of diluent
Dosage	0.5ml
Storage	Maintain continuously frozen at an average temperature of -15° C (5 F) or colder. If unconstituted vaccine is left out, clearly mark the vial, place in the freezer, and contact Merck at 1-800-9VARIVAX (1-800-9-827-4829) for instructions. Varivax must be used within 30 minutes of reconstitution.
Injection Site	Deltoid
Route	Subcutaneous (SC)
Needle Size	23 to 25 gauge, 5/8 to 3/4 inch
Administration	May be administered simultaneously or at any interval between doses containing inactivated antigens. Must have at least a 4 week interval if not administered simultaneously with MMR vaccine.

Should a second dose of Varicella vaccine be indicated for children aged 12 months-12 years (e.g. during a Varicella outbreak), at least 3 months should elapse between administration of any 2 doses of Varicella-containing vaccine, including single antigen Varicella vaccine or MMRV vaccine.

Routine schedule for Varicella vaccination of children:

Dose	Customary Age	Minimum Interval
1	12-15 months	3 months for children aged 12 months-12 years
2	4-6 years	3 months for children aged 12 months-12 years

* ACIP recommends Varicella vaccine for use in susceptible persons following exposure to Varicella. Varicella vaccine is effective in preventing illness or modifying Varicella severity if administered within 3 -5 days of exposure.

Contraindications to Varivax vaccination:

1. Moderate to severe illness (i.e. child appears ill).
2. Anaphylactic reaction following prior dose of vaccine.
3. Immunosuppression
4. Pregnancy
5. Receipt of antibody-containing blood products
6. Anaphylactic reaction to neomycin

Revised 07/06

**Measles, Mumps, Rubella and Varicella (MMRV)
(Live Vaccine/Preservative Free)**

Manufacturer:	Merck & Co., Inc
Brand Name:	ProQuad®
Formulation:	10 one-dose vials which must be reconstituted with supplied diluent
Dosage:	0.5 ml
Storage:	Place vaccine in freezer immediately upon receipt. Store at 5° F (-15° C) Diluent should be stored separately at room temperature 68°-77°F (20°-25° C) or in a refrigerator 36°-46° F (28° C). Do Not Freeze Diluent
Injection Site:	Upper outer triceps of the arm or Anterolateral fatty tissue of the thigh
Route:	Subcutaneous (SubQ)
Needle Size:	23 to 25 gauge, 5/8 to 3/4 inch

Administration: May be administered simultaneously or at any interval between doses containing inactivated antigens but at least 28 days before or after another live, attenuated vaccine, except varicella vaccine for which a minimum interval of 3 months is recommended.

Administer immediately after reconstitution. Discard if reconstituted vaccine is not used within 30 minutes. Do not freeze reconstituted vaccine.

Licensed for the use of children that are 12 months to 12 years of age

Routine schedule for MMRV vaccination of children:

<u>Dose</u>	<u>Indication</u>	<u>Age recommendation</u>
1	Dose 1-MMR and Varicella	12 months—15 months
2.	Dose 2- MMR and Varicella	4 -6 years

First dose Ages 12-47 months- Either MMR vaccine and varicella or MMRV vaccine may be used for the first dose of measles, mumps, and rubella and varicella vaccines. Clinicians should inform the parents or caregivers regarding the benefits and risks of both vaccination options. CDC recommends that MMR vaccine and varicella vaccine be given for the first dose in this age group unless the parent or caregiver expresses a preference for the MMRV vaccines

Second dose or First dose > 48 months-MMRV is recommended over the separate injections of MMR and varicella vaccine, but provider evaluation, patient preference, and the risk for adverse events should be considered.

Contraindications to MMRV vaccination:

1. Anaphylactic reaction to neomycin
2. Hypersensitivity to any component of the vaccine including gelatin or after a previous vaccination with MMRV, varicella or MMR vaccines.
3. Primary or acquired immunodeficiency including HIV infections/AIDS, cellular immune deficiencies, hypogammaglobulinemia, and dysgammaglobulinemia.

4. Family history of congenital or hereditary immunodeficiencies, unless the immune competence of the potential vaccine recipient has been demonstrated
5. Systemic immunosuppressive therapy, including oral steroids $\geq 2\text{mg/kg}$ of body weight or ≥ 20 mg/day of prednisone or equivalent for persons who weigh >10 kg, when administered for ≥ 2 weeks
6. Pregnancy

Precautions:

1. ≤ 11 months since the receipt of an antibody-containing blood product
2. History of thrombocytopenia or thrombocytopenic purpura
3. Moderate or severe acute illness with or without fever
4. A personal or family (i.e., sibling or parent) history of seizures of any etiology

Reference: MMWR Vol 54NoMM47; 1212; ProQuad® package inset –Merck & Co., Inc. 08/05; MMWR Use of combination Measles, Mumps, Rubella and Varicella Vaccine May 7, 2010/59 (03); 1-12

http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5903a1.htm?s_cid=rr5903a1_e

Pneumococcal Conjugate Vaccine (PCV13)

Manufacturer	Wyeth
Brand	Prevnar 13
Formulation	10 one-dose syringes
Dosage	0.5 ml
Storage	Refrigerate @ 2 ° - 8 ° C (35°- 46 °) Do Not Freeze
Injection Site	Vastus Lateralis or Deltoid (according to muscle mass)
Route	Intramuscular (IM)
Needle Size	22 to 25 gauge, 1 to 1 1/4 inches

Recommended Schedule			
Dose 1	Dose 2	Dose 3	Dose 4
2 months	4 months	6months	12-15 months
Minimum Interval Schedule			
6 weeks old	4weeks> dose1	4weeks >dose 2	12-15 months≥8wks > dose 3

Age	PCV History	Recommended PCV 13
7-11 months	0 doses	3 doses, 4wks between dose 1 and 2, 3 rd dose >12 months of age and ≥8 weeks after dose 2
	1 or 2 doses < 7 months	1 dose at 7-11 mo, with second dose at 12-15 mo, ≥8 weeks later
12-23 months	0 doses	2 doses ≥8 weeks apart
	1 dose < 12 months old	2 doses ≥8 weeks apart
	Doses 1-4 adequately spaced, and > 12 mo old	1 dose ≥8weeks >previous dose
24-59		
Healthy Children	Any incomplete schedule	1 dose ≥8 weeks after the last dose
	Complete 4 doses series	1 dose ≥8 weeks after the last dose
High Risk Children*	Incomplete schedule with 1 or 2 doses	2 doses, first dose ≥8 weeks after the last dose then next dose in 8 weeks
	Incomplete 3 doses	1 dose ≥8 weeks after the last dose
	Complete 4 doses	1 dose ≥8 weeks after the last dose
High Risk 6yrs-18yrs*	None or any doses of PCV or PPSV23	1 dose ≥8 weeks after the last dose or one dose at visit

***High Risk Children:** 2-18yrs of age with chronic medical conditions such as: cell disease, damaged spleen or asplenia, cochlear implants, diabetes, HIV/AIDS or other diseases that suppress the immune system, taking immunosuppressive drugs or steroids.

Note: Use of PCV13 does not replace the use of (PPV23) in high risk children ≥ 24 months.

Contraindications: History of anaphylaxis after a previous dose of PCV or to any components within PCV

Precautions: Acute, moderate or severe illness with or without a fever.

Revised 5/10

Meningococcal (Groups A, C, Y and W-135) Polysaccharide Diphtheria Toxoid Conjugate Vaccine - MCV4 (Preservative Free)

- Manufacturer:** Sanofi Pasteur
- Brand Name:** Menactra
- Formulation:** Single dose vials
- Dosage:** 0.5ml
- Storage:** Store at 2°-8° C (35°-46° F). **Do not freeze.**
- Injection Site:** Deltoid (upper arm) for adolescent/adults
Vastus lateralis (anterolateral thigh) for child that does not have adequate muscle mass
- Route:** Intramuscular (IM)
- Needle Size:** 20 to 25 gauge, 1 to 1½ inches
- Administration:** May be administered simultaneously or at any interval between doses of inactivated or live antigens. Menactra vaccine **must not** be mixed with any vaccine in the same syringe. Therefore, separate injection sites and different syringes should be used in case of concomitant administration.
- Indications:** Menactra vaccine is indicated for active immunization for individuals **2–55 years of age** for the prevention of invasive meningococcal disease caused by *N meningitidis* serogroups A, C, Y and W-135.
- Target Population**
- **Adolescents aged 11-12 yrs. during preadolescent assessment visit**
 - **Adolescents aged 13-18 yrs. who were not vaccinated during preadolescent visit**
 - **College freshman who live in dormitories**
 - **Children 2-10 yrs at high risk for invasive meningococcal disease**
- Risk factors are: traveling to countries where *N. meningitidis* is hyperendemic or has epidemic areas, HIV infection, terminal deficiencies, anatomic or functional asplenia.**

Menactra vaccine is not indicated for immunization against diphtheria.

Schedule: Single dose.

Contraindications:

- 1.) Hypersensitivity to any component of Menactra vaccine including diphtheria toxoid, or a life-threatening reaction after previous administration of a vaccine containing similar components.
- 2.) Hypersensitivity to dry natural rubber latex.

Precautions:

- 1.) History of Guillain-Barre' Syndrome
- 2.) Moderate or severe illness with or without fever

Reference: Menactra vaccine package insert, Aventis Pasteur, (October 2007). "Prevention and Control of Meningococcal Disease", MMWR; CDC, (Dec.7, 2007;56(48):1265-6.

Rev. 4/08

**MenACWY-CRM (Meningococcal Groups A, C, Y and W-135) Oligosaccharide
Diphtheria CRM197 Conjugate Vaccine - Menveo®**

Manufacturer:	Novartis Vaccines and Diagnostics
Brand Name:	Menveo®
Formulation:	Single dose vials containing MenA lyophilized conjugate and vials of MenCYW135 liquid conjugate for reconstitution to make a single dose of Menveo®
Dosage:	0.5ml
Storage:	Store at 2°-8° C (35°-46° F). Do not freeze and protect from light
Injection Site:	Deltoid
Route:	Intramuscular (IM)
Needle Size:	20 to 25 gauge, 1 to 1½ inches
Vaccine Preparation:	Reconstitute by using a syringe to withdraw the liquid contents of the MenCYW-135 liquid conjugate and injecting it into the MenA lyophilized conjugate. Gently invert or swirl the vial until the vaccine is dissolved. The reconstituted vaccine should be administered immediately, but may be held at or below 77 ° F (25 ° C) for up to 8 hrs.
Administration:	May be administered simultaneously or at any interval between doses of inactivated or live antigens. Menveo® vaccine must not be mixed with any vaccine in the same syringe. Therefore, separate injection sites and different syringes should be used in case of concomitant administration.
Schedule:	Single Dose
Indications:	Menveo ® vaccine is indicated for individuals 11–55 years of age for the prevention of invasive meningococcal disease caused by <i>N meningitidis</i> serogroups A, C, Y and W-135. Target Population <ul style="list-style-type: none">• Adolescents aged 11-12 yrs. during preadolescent assessment visit• Adolescents aged 13-18 yrs. who were not vaccinated during preadolescent visit• Persons of 19 -55 yrs who are of high risk for meningococcal disease including college freshman who live in dormitories, microbiologists who are exposed routinely to isolates of <i>Neisseria meningitides</i>, military recruits, persons who travel to or reside in countries where meningococcal disease is hyperendemic or epidemic, persons who have persistent complement component deficiencies and persons with anatomic or functional asplenia• Children 2-10 yrs at high risk for invasive meningococcal disease should receive MCV4 and persons aged >55 years should receive MPSV

Contraindications:

- 1.) Hypersensitivity to any component of Menveo® vaccine or any other CRM197 diphtheria toxoid, or meningococcal-containing vaccine.

Precautions:

- 1.) History of Guillain-Barre' Syndrome
- 2.) The immune response may be suboptimal if administered to an immunocompromised person including those that are receiving immunosuppressive therapy
- 3.) Person with bleeding disorder or persons receiving anticoagulant therapy
- 4.) Category B Precautions include pregnancy, nursing mothers children <11 yrs and adults > 55 yrs

Note: Because vaccine recipients may develop syncope, sometimes resulting in falling with injury, observation for 15 minutes after administration is recommended. Syncope, sometimes associated with tonic-clonic movements and other seizure-like activity. When syncope is associated with tonic-clonic movements, the activity is usually transient by maintaining a supine or Trendelenburg position.

Reference: Menveo® vaccine package insert, Novartis Vaccines and Diagnostics, (February 2010). Licensure of a Meningococcal Conjugate Vaccine (Menveo) and Guidance for Use-ACIP, 2010. <http://www.cdc.gov/mmwr/PDF/wk/mm5909.pdf> pg 273

Rev. 4/14/10

Rotavirus Vaccine: RotaTeq® RV5 and Rotarix® RV1
Live, attenuated vaccines

	RV5 (RotaTeq)	RV1 (Rotarix)
Manufacturer	Merck	GlaxoSmithKline
Number of doses in series	3	2
Recommended schedule	2, 4, and 6 months	2 and 4 months
Vaccine Administration (Oral)	2ml (premixed)	1ml (reconstitute)
Storage and Handling	35-46°F (2-4°C°) Do Not Freeze	Protect from light
First dose-Minimum age	6 weeks	
First dose-Maximum age	14 weeks, 6 days	
Minimum age between doses	4 weeks	
Last dose-Maximum age	8 months, 0 days	

ACIP recommends that the rotavirus vaccine series be completed with the same product whenever possible. However, vaccination should not be deferred if the product used for previous doses is not available or is unknown. If any dose in the series is Rotateq (RV5) or the product is unknown for any dose in the series, a total of three doses of rotavirus vaccine should be given by 8 months, 0 days.

Contraindications

1. Serious allergic reaction to a previous dose of rotavirus vaccine or to any of the components in the vaccine.
2. History of Severe Combined Immunodeficiency Disease (SCID)*

Precautions

1. Moderate to severe acute gastroenteritis
2. Moderate to severe illness
3. Pre-existing chronic gastrointestinal disease
4. Previous history of Intussusception (IS)
5. Altered immunocompetence due to blood dyscrasias, leukemia, lymphomas or malignant neoplasms affecting the bone marrow or lymphatic system, immunosuppressive therapy, HIV/AIDS.
6. Infant with mother’s testing HIV/AIDS positive and infant HIV is unknown
7. History of receiving a blood transfusion or blood products, including immunoglobulin within 42 days.

CDC recommends consultation with an immunologist or infectious disease specialist before rotavirus vaccine is administered to infants with confirmed or suspected altered immunocompetence.

Rotavirus Vaccine: RotaTeq® RV5 and Rotarix® RV1
Live, attenuated vaccines

Special Situations

- * Premature infants (<37 weeks gestation), immunize if they are 1) at least 6 weeks of age, 2) clinically stable, 3) are being or have been discharged from nursery
- * Protection of immunocompromised household member(s) from exposure to wild virus if infant living in household with immunocompromised person(s).
- * Re-administration not recommended if infant regurgitates, spits out or vomits during or after administration of vaccine dose.
- * Infants living in household with pregnant women can be vaccinated
- * If recently vaccinated child is hospitalized for any reason, no precautions, other than routine universal precautions need be taken to prevent the spread of vaccine virus in the hospital setting.

2006 ACIP recommendations for the Prevention of Rotavirus gastroenteritis among infants and children;

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5512a1.htm>

ACIP Provisional Recommendations for the Prevention of Rotavirus gastroenteritis among infants and children; <http://www.cdc.gov/vaccines/recs/provisional/downloads/roto-7-1-08-508.pdf>

*MMWR 6/11/10/59(22); 687-688 Addition of SCID as a Contraindication for Rotavirus vaccine

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5922a3.htm?s_cid=mm5922a3_e%0d%0a

**Quadrivalent Human Papillomavirus (Types 6, 11, 16, 18)
Recombinant Vaccine (Preservative Free)**

Manufacturer: Merck

Brand Name: Gardasil®

Formulation: Single dose vials and prefilled single dose syringes

Dosage: 0.5 ml

Storage: Store at 2° - 8° C (35° - 46° F). **Do Not Freeze**

Injection site: Deltoid or Anterolateral area of thigh

Route: Intramuscular (IM)

Needle Size: 20 to 25 gauge, 1 to 1½ inches

Indications: Gardasil® vaccine is indicated by FDA in females 9-26 years of age. ACIP recommends routine vaccination for all females 11-12 years of age.

VFC-eligible females 9 through 18 years of age are entitled to receive VFC vaccine. The advisory committee has noted that the vaccination series can be started as early as 9 years of age at the discretion of the physician or health care provider.

*HPV quadrivalent (Gardasil) vaccine may be administered to VFC-eligible males 9 through 18 years of age under ACIP "permissive use" language. HPV is not required for males to participate in the VFC program. The dosing and schedule are the same as for females. HPV vaccine "may not" be administered to "Underserved" males.

Schedule: Dosage Intervals

Dose 1	(Dose 1 to 2)	(Dose 2 to 3)
Elected date	2 months	4 months

There must be 6 months separating dose 1 and dose 3.

Contraindications:

Anaphylactic reaction following prior dose of Gardasil® vaccine.
Individuals with hypersensitivity, including severe allergic reactions to yeast

Note: Because vaccine recipients may develop syncope, sometimes resulting in falling with injury, observation for 15 minutes after administration is recommended. Syncope, sometimes associated with tonic-clonic movements and other seizure-like activity, has been reported following vaccination with Gardasil®. When syncope is associated with tonic-clonic movements, the activity is usually transient by maintaining a supine or Trendelenburg position.

Precautions:

Gardasil® should be used during pregnancy only if clearly needed.

The immunologic response to Gardasil® may be diminished in immunocompromised individuals

It is not known if Gardasil® is secreted through breast milk.

Reference: Gardasil vaccine package insert, Merck & Co., Inc, (Updated June 29, 2009)

<http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm165145.htm>.

Additional information regarding syncope following vaccination may be found in the May 2, 2008, issue of the *Morbidity and Mortality Weekly Report* at

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5717a2.htm>.

Rev. 3/22/10

**Bivalent Human Papillomavirus (Types 16, 18)
Recombinant Vaccine (Preservative Free)**

Manufacturer: GlaxoSmithKline

Brand Name: Cervarix®

Formulation: Single dose vials and prefilled single dose syringes

Dosage: 0.5 ml

Storage: Store at 2° - 8° C (35° - 46° F). **Do Not Freeze**

Injection site: Deltoid

Route: Intramuscular (IM)

Needle Size: 20 to 25 gauge, 1 to 1½ inches

Indications: **Cervarix®** vaccine is indicated by FDA in females (only) 10-25 years of age. ACIP recommends routine vaccination for all females 11-12 years of age. **Cervarix®** should be offered to females 13-25 yrs of age who have not completed the HPV vaccination series.

VFC-eligible females 9 through 18 years of age are entitled to receive VFC vaccine. The advisory committee has noted that the vaccination series can be started as early as 9 years of age at the discretion of the physician or health care provider.

Schedule: Recommended Intervals

Dose 1	(Dose 1 to 2)	(Dose 2 to 3)
Elected date	1 month	6 months

Minimum Intervals

Dose 1	(Dose 1 to 2)	(Dose 2 to 3)	(Dose 1 to 3)
Elected date	4 weeks	12 weeks	24 weeks

Contraindications:

Anaphylactic reaction following prior dose of **Cervarix®** vaccine or any components of the vaccine. The vaccine components may be found:

www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf.

The prefilled syringe contains latex therefore should not be used to administer to a latex sensitive person. The vial stopper does not contain latex.

Note: Because vaccine recipients may develop syncope, sometimes resulting in falling with injury, observation for 15 minutes after administration is recommended. Syncope, sometimes associated with tonic-clonic movements and other seizure-like activity, has been reported following vaccination with Gardasil®. When syncope is associated with tonic-clonic movements, the activity is usually transient by maintaining a supine or Trendelenburg position.

Precautions:

Cervarix® is not recommended during pregnancy.

It is not known if **Cervarix®** is secreted through breast milk

The immunologic response to **Cervarix®** may be diminished in immunocompromised individuals

Reference: **Cervarix®** vaccine package insert, GlaxoSmithKline Biologicals, Inc, (2009)

<http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM186981.pdf>

ACIP Meeting- October 21-22, 2009 Summary of Key Actions on HPV Vaccine

<http://www.cdc.gov/vaccines/recs/acip/downloads/min-oct09.pdf> page 30

Additional information regarding syncope following vaccination may be found in the May 2, 2008, issue of the *Morbidity and Mortality Weekly Report* at

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5717a2.htm>.

Seasonal Influenza Virus Vaccine Live, Intranasal (LAIV)

Manufacturer	MedImmune
Brand Name	FluMist®
Age Healthy people	2 years - 49 years of age
Formulation	10 pre-filled single-use sprayers (0.2 ml)
Dosage	0.2 ml dose with 0.1 ml in each nostril (Thimerosal mercury content = 0 mcg)
Storage	Stored in a refrigerator between 2-8°C (35-46°F) Do Not Freeze
Route	Intranasal only

Administration

Should not be administered until 48 hours after cessation of influenza antiviral therapy
Influenza antiviral medications should not be administered for 2 weeks after receipt of FluMist®

Schedule for FluMist® administration

Age	Dose	Number of Doses	Route and Site
Children 2 - 8 years not previously vaccinated with influenza vaccine	0.2 ml	2 doses* Interval at least 4 weeks apart	Intranasal 0.1ml in each nostril
Children 2 – 8 years who received only one dose for the first time last influenza season	0.2 ml	2 doses* Interval at least 1 weeks apart	Intranasal 0.1ml in each nostril
Children 2 – 8 years, not included in the above groups, who have had two previous influenza vaccinations	0.2 ml	1 dose	Intranasal 0.1 ml in each nostril
Children, adolescents and adults age 9 - 49 years	0.2 ml	1 dose	Intranasal 0.1 ml in each nostril

* Children aged 6 months-8 years who have never received influenza vaccine before should receive 2 doses, at least 4 weeks apart. Those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year, spaced 4 weeks apart.

Contraindications and Precautions for Use of LAIV

The effectiveness or safety of LAIV is not known for the following groups and administration of LAIV is contraindicated:

- persons with a history of hypersensitivity, including anaphylaxis, to any of the components of LAIV or to eggs.
- persons aged <2 years or those aged ≥50 years;
- adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, neurological/neuromuscular, hematological, or metabolic disorders (including diabetes mellitus);

- adults and children who have immunosuppression (including immunosuppression caused by medications or by HIV);
- children aged 2--4 years whose parents or caregivers report that a health-care provider has told them during the preceding 12 months that their child had wheezing or asthma, or whose medical record indicates a wheezing episode has occurred during the preceding 12 months;
- children or adolescents aged 6 months--18 years receiving aspirin or other salicylates (because of the association of Reye syndrome with wild-type influenza virus infection); or
- pregnant women.

A moderate or severe illness with or without fever is a precaution for use of LAIV. GBS within 6 weeks following a previous dose of influenza vaccine is considered to be a precaution for use of influenza vaccines. LAIV should not be administered to close contacts of immunosuppressed persons who require a protected environment.

Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Report System (VAERS) at www.vaers.hhs.gov or (800) 822-7967

Medical Director's Signature: _____ Effective Date:

Reference: MMWR, July 24, 2009/58; 1-52
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0724a1.htm>

Revised 09/11/09

**Seasonal Influenza Vaccine
Inactivated, Injectable**

Manufacturer Sanofi Pasteur

Brand Name Fluzone®

Age 6 months of age and older

Dose/Presentation 0.25 ml prefilled syringe (thimerosal mercury content = 0 mcg)
0.5 ml prefilled syringe (thimerosal mercury content = 0 mcg)
0.5 ml vial (thimerosal mercury content = 0 mcg)
5.0 ml multi-dose vial (thimerosal mercury content = 25 mcg/0.5 ml dose)

Storage Refrigerate immediately. Store at 2°-8° C (35°-46° F). **Do not Freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 22 to 25 gauge, 7/8 to 1¼ inches

Administration May be administered simultaneously or at any interval between doses with inactivated or live antigen.

Schedule for **Fluzone®** vaccination

Age	Dose	Number of Doses	Route and Site
6-35 months	0.25 ml	1 or 2 *	Intramuscular (IM) in anterolateral aspect of thigh(or in deltoid if muscle mass is sufficient)
3-8 years	0.5 ml	1 or 2 *	Intramuscular (IM) in anterolateral aspect of thigh(or in deltoid if muscle mass is sufficient)
9 years and older	0.5 ml	1	Intramuscular (IM) in deltoid muscle

* Children aged 6 months-8 years who have never received influenza vaccine before should receive 2 doses, at least 4 weeks apart. Those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year, spaced 4 weeks apart.

Contraindications to Influenza vaccination:

1. Persons with a severe allergic reaction to a previous dose of influenza vaccine
2. Persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine unless the recipient has been desensitized.
3. Persons with acute febrile illness, until their symptoms have abated

Precautions:

Persons who developed Guillain-Barre' (GBS) within 6 weeks of a previous influenza vaccination

Seasonal Influenza Recommendations of the Advisory Committee on Immunization Practices (ACIP)

- all children 6 months -18years
- children aged 6—59 months at risk for influenza-related complications and severe disease
- pregnant women
- persons 50 years or older
- persons of any age with certain chronic medical conditions: long-term heart or lung problems, including asthma any condition (cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling

of respiratory secretions, or that can increase the risk for aspiration, renal dysfunction, chronic metabolic diseases including diabetes, anemia, hemaglobinopathies or immunosuppression including immunosuppression caused by medications or by HIV, long-term aspirin therapy

- residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- persons who live with or care for persons at high risk, including
 - household contacts that have frequent contact with persons at high risk to influenza
 - infants < 6 months of age
 - health-care workers

Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Report System (VAERS) at www.vaers.hhs.gov or (800) 822-7967

Medical Director's Signature: _____ Effective Date:

Reference: MMWR, July 24, 2009/58; 1-52
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0724a1.htm>

Revised 09/11/09

Seasonal Influenza Vaccine Inactivated, Injectable

Manufacturer Novartis Vaccine Corporation

Brand Name Fluvirin™

Age 4 years of age and older

Dose/Presentation 0.5 ml prefilled syringe (thimerosal mercury content = <1.0 mcg/0.5 ml dose)
5.0 ml multi-dose vial (thimerosal mercury content = 24.5 mcg/0.5 ml dose)

Storage Refrigerate immediately. Store at 2°-8° C (35°-46° F). **Do not Freeze.**

Injection Site Anterolateral aspect of the upper thigh or deltoid

Route Intramuscular (IM)

Needle Size 22 to 25 gauge, 7/8 to 1¼ inches

Administration May be administered simultaneously or at any interval between doses of any other inactivated or live vaccine.

Schedule for **Fluvirin™** vaccination

Age	Dose	Number of Doses	Route and Site
4 yrs of age and older	0.5 ml	1 or 2 *	Intramuscular (IM) in anterolateral aspect of thigh (or in deltoid if muscle mass sufficient)

* Children aged 6 months-8 years who have never received influenza vaccine before should receive 2 doses, at least 4 weeks apart. Those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year, spaced 4 weeks apart.

Contraindications to Influenza vaccination:

1. Persons with a severe allergic reaction to a previous dose of influenza vaccine
2. Persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine unless the recipient has been desensitized.
3. Persons with acute febrile illness, until their symptoms have abated

Precautions:

Persons who developed Guillain-Barre' (GBS) within 6 weeks of a previous influenza vaccination

Seasonal Influenza Recommendations of the Advisory Committee on Immunization Practices (ACIP)

---all children 6 months -18years

---children aged 6—59 months at risk for influenza-related complications and severe disease

---pregnant women

---persons 50 years or older

---persons of any age with certain chronic medical conditions:

long-term heart or lung problems, including asthma

any condition (cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk for aspiration, renal dysfunction, chronic metabolic diseases including diabetes, anemia, hemaglobinopathies or immunosuppression including immunosuppression caused by medications or by HIV, long-term aspirin therapy

- residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- persons who live with or care for persons at high risk, including
 - household contacts that have frequent contact with persons at high risk to influenza
 - infants < 6 months of age
 - health-care workers

Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Report System (VAERS) at www.vaers.hhs.gov or (800) 822-7967

Medical Director's Signature: _____ Effective Date:

Reference: MMWR, July 24, 2009/58; 1-52
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Revised 09/11/09