



# Medical Assistance Program Bulletin

Colorado Title XIX  
Fiscal Agent



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Click on the Provider Services tab at the top of the web page

Medical Assistance Program bulletins contain important policy and billing information and should be shared promptly with billing staff.

Bulletins supplement information in the Medical Assistance Program Provider Manual and should be retained with the provider manual for reference. Retain all bulletins until published notification advises that the information is obsolete or reproduced in subsequent bulletins or provider manual updates.

Please direct questions about bulletins and billing information to Medical Assistance Program Provider Services.

Distribution: Practitioners, Home Health, Hospitals and Clinics

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## Immunizations Benefit Update

This bulletin provides a comprehensive summary of the Colorado Medical Assistance Program immunization benefits. Please retain this bulletin with your Medical Assistance Program Provider Manual for reference.

### Table of Contents

IMMUNIZATIONS FOR CHILDREN.....	1
IMMUNIZATIONS FOR ADULTS .....	1
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) VACCINE PROGRAMS FOR CHILDREN.....	1
Vaccine Programs for Children.....	1
Colorado Infant Immunization program.....	2
Immunization program participation.....	2
GENERAL BILLING INSTRUCTIONS.....	2
Children's Immunizations.....	2
Adult Immunizations.....	2
PROVIDER-SPECIFIC BILLING INSTRUCTIONS.....	3
REIMBURSEMENT FOR CHILDREN'S IMMUNIZATIONS .....	3
REIMBURSEMENT FOR ADULT IMMUNIZATIONS.....	3
MEDICARE CROSSOVER CLAIMS .....	4
INFLUENZA VACCINE.....	4
PEDIARIX® FIVE-IN-ONE COMBINATION VACCINE .....	5
SYNAGIS VACCINE.....	5
IMMUNIZATION CODING QUICK REFERENCE .....	Attachment A
RECOMMENDED CHILDHOOD IMMUNIZATION SCHEDULE.....	Attachment B

### Immunizations for Children (Under Age 21)



Immunizations for children under age 21 are a Medical Assistance Program benefit when medically necessary, when needed to enter the work force, or when needed to attend school. Immunization benefits for children are provided through the Medical Assistance Program's Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program for children.

### Immunizations for Adults (Ages 21 and Older)

Immunizations for adults ages 21 and older are a Medical Assistance Program benefit when medically necessary, when needed to enter the work force, or when needed to attend school.

*Please note: For all clients, immunizations for the sole purpose of international travel are not a benefit.*

### Colorado Department of Public Health and Environment (CDPHE) Vaccine Programs for Children

The CDPHE furnishes some vaccines to medical providers at no cost through two programs, the federal Vaccines For Children (VFC) Program and the Colorado Infant Immunization Program. Vaccines available from the VFC and the Infant Immunization Programs are shown on Attachment A.

#### Vaccines for Children (VFC) Program

Children under age 19 are eligible to receive vaccines at no cost through the VFC Program if they are:

- Medical Assistance Program-enrolled,
- Uninsured,
- American Indian/Native Alaskan, or
- Underinsured (only eligible when provided by RHCs or FQHCs. Children are considered underinsured if their insurance does not provide immunizations as a regular benefit).



## Colorado Infant Immunization Program



The Colorado Infant Immunization Program furnishes vaccines at no cost to providers for Medical Assistance Program clients who are 19 and 20 years of age. The vaccines are provided only for Medical Assistance Program-enrolled clients. The free vaccine obtained through the Infant Immunization Program may be used only for Medical Assistance Program clients ages 19 and 20.

Vaccine usage is monitored by comparing the number of doses billed to the Medical Assistance Program with the number of vaccine doses shipped to providers. Only doses billed to and paid for by the Medical Assistance Program are recognized. It is important that providers use accurate procedure codes and bill vaccine doses to the Medical Assistance Program as soon as possible after the vaccine is administered.

## Immunization Program Participation

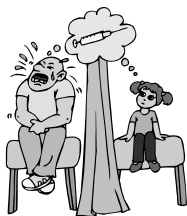
Participation in the VFC and Infant Immunization Programs is voluntary. Providers, including but not limited to private practitioners, managed care providers, public health agencies, RHCs, hospital outpatient clinics, and FQHCs, who wish to participate in the immunization programs must enroll with the CDPHE. The Medical Assistance Program pays providers an Administration, Recordkeeping and Tracking (ART) fee for immunizations that are available through the VFC or Infant Immunization Program. Because vaccine is available at no cost through these programs, providers who choose to obtain vaccine from other suppliers may not request nor receive reimbursement in addition to the ART payment.



Information about the CDPHE immunization programs is available from:

Colorado Department of Public Health and Environment (CDPHE)  
Immunization Program  
DCEED-IMM-A4  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530  
Phone 303-692-2798/303-692-2363

Providers are required to give clients the federally required "Important Information Statement" or, for vaccines covered by the national Vaccine Injury Compensation Program, the appropriate "Vaccine Information Statement". These statements may be downloaded from the Centers for Disease Control and Prevention (CDC) website at: <http://www.cdc.gov/nip/publications/VIS/default.htm>.



## General Billing Instructions

Any qualified Medical Assistance Program-enrolled provider including but not limited to private practitioners, public health agencies, RHCs, hospital outpatient clinics, and FQHCs may provide immunization services. Providers must use CPT procedure codes to submit all immunization claims. Providers should verify the accuracy of claims submitted for DTaP, DT Tdap, and Td immunizations. CDPHE Infant Immunization Program auditing shows a significant number of billing errors. Accurate coding is important. Please refer to the Immunization Coding Quick Reference (Attachment A).

## Children's Immunizations

Immunizations can be given during an EPSDT Periodic Screening appointment and/or during an EPSDT Inter-periodic visit.

- If immunizations are given during an **EPSDT Periodic Screening** appointment or during any other medical care appointment, referred to as an **EPSDT Inter-periodic visit**, submit claims on the Colorado 1500 or 837 Professional (P) using the appropriate Evaluation and Management CPT and diagnosis codes which may include "Need for Vaccination" codes, V03.0 through V06.9. Practitioners must maintain records that document the full nature and extent of the services rendered during this visit.
- If immunization is the **only service** provided to a Medical Assistance Program client under age 21, the service must be billed on the Colorado 1500 or 837P. Practitioners should use the appropriate Evaluation and Management CPT and diagnosis codes, which may include "Need for Vaccination" codes, V03.0 through V06.9.



## Adult Immunizations

Providers must submit claims for adult immunization services on the Colorado 1500 or 837 professional claim form. Providers must bill using the correct CPT code for each administered immunization. If an immunization is the only service rendered, providers **may not** submit charges for an Evaluation/Management (E/M) service. A \$2.00 administration reimbursement is automatically added to the payment for each vaccine. If E/M services are rendered in addition to the immunization administration, enter the diagnosis and appropriate procedure code on the claim.



## Provider-Specific Billing Instructions

### Managed Care Programs

Medical Assistance Program Health Maintenance Organization (HMO) or Prepaid Inpatient Health Plan (PIHP) enrolled clients must receive immunization services from the HMO or PIHP. For clients enrolled in the Primary Care Physician Program (PCPP), the primary care physician (PCP) should provide the immunization services.

### Outpatient, Emergency Room, or Inpatient Hospital

Immunization administration may be billed as part of an OP or ER visit when the visit is for medical reasons. OP or ER visits cannot be billed for the sole purpose of immunization administration. Administration of an immunization at the time of an inpatient stay is included in the DRG.



### Federally Qualified Health Centers (FQHCs) and Rural Health Centers (RHCs)

FQHCs and RHCs may not bill an encounter rate for only administering an immunization. Encounters for other reasons may include the administration of the immunization, but the immunization administration does not change the reimbursement to the FQHC or RHC for the original encounter. If an immunization is the only service provided, the provider should bill on the Colorado 1500 or 837 professional claim form (see General Billing Instructions section).

### Nursing Facilities

Nursing facility residents may receive immunizations if ordered by their physician. The skilled nursing component for immunization administration is included in the facility's rate. The vaccine itself may be billed directly to the Medical Assistance Program by a Medical Assistance Program-enrolled pharmacy. The pharmacy must bill the appropriate NDC for the individual vaccine dose under the client's Medical Assistance Program ID.

### Home Health



A client confined to the home and receiving home health services may receive an immunization if the administration is part of a normally scheduled home health visit. A home health visit for sole purpose of immunization administration is not a benefit. The pharmacy bills the vaccine as an individual dose under the client's Medical Assistance Program ID. The home health agency may not bill for the vaccine.

### Alternative Health Care Facilities (ACFs) / Group Homes

Residents of an ACF may receive immunizations from their own physician. They may also receive vaccines under home health as stated above in the home health guideline.

The Medical Assistance Program does not pay for home health agencies, physicians, or other non-physician practitioners to go to nursing facilities, group homes, or residential treatment centers to administer immunizations (for example: flu vaccines) to groups of clients.

## Reimbursement for Children's Immunizations

### Vaccines Not Available Through the VFC and Infant Immunization Programs

Medically necessary vaccines that are not provided to practitioners at no cost by the VFC or Infant Immunization Program are reimbursed using the following formula:

$$\text{Average Wholesale Price (AWP)} + 10 \text{ percent} + \$2.00 \text{ for administration}$$



### Vaccines Available Through the VFC and Infant Immunization Programs

The Medical Assistance Program pays providers an Administration, Recordkeeping and Tracking (ART) fee for immunizations that are available through the VFC or Infant Immunization Program. Because vaccine is available at no cost through these programs, providers who choose to obtain vaccine from other suppliers may not request nor receive reimbursement above the ART payment. Vaccines available from the VFC and Infant Immunization Programs are shown on Attachment A.



#### Private practitioners – ART Payment

Practitioners billing for immunizations for Medical Assistance Program-enrolled children (under age 21) when vaccine is available at no-cost from the CDPHE VFC Program are paid an ART fee of \$6.50 for each immunization.

#### Public Health Agencies – ART Payment

Public health agencies are eligible to receive vaccines at no cost from the CDPHE VFC Program, for administration to eligible children under age 21. The clinic may bill and be reimbursed the \$2.00 ART fee for each immunization.

## Reimbursement for Adult Immunizations

Immunizations for adults ages 21 and older are reimbursed when medically necessary, when needed to enter the work force, or when needed to attend school. Adult immunizations are reimbursed using the following formula:

$$\text{Average Wholesale Price (AWP)} + 10 \text{ percent} + \$2.00 \text{ for administration}$$

## Medicare crossover claims

For Medicare crossover claims, the Medical Assistance Program pays the Medicare deductible and coinsurance or, the Medical Assistance Program allowed benefit minus the Medicare payment, whichever amount is less. If Medicare's payment for immunization services is the same or greater than the Medical Assistance Program allowable benefit, no additional payment is made. If Medicare pays 100% of the Medicare allowable, the Medical Assistance Program makes no additional payment.

## Influenza Vaccine

Influenza vaccine is a benefit for all Medical Assistance Program clients who have full benefits. Valid CPT codes are as follows:

CPT Code	Valid Ages	Reimbursement for children (under age 21)	Reimbursement for adults (age 21 and older)
90655	6 – 35 months	\$6.50 (\$2.00 for health departments)	Not a benefit
90656	3 years and above	\$6.50 (\$2.00 for health departments)	\$11.89
90657	6 – 35 months	\$6.50 (\$2.00 for health departments)	Not a benefit
90658	3 years and above	\$6.50 (\$2.00 for health departments)	\$11.89
90660	5 – 20 years	\$6.50 (\$2.00 for health departments)	Not a benefit

CPT codes 90465 – 90474 for vaccine administration are not a benefit. Please note that CPT code 90660, Influenza virus vaccine, live, for intranasal use (brand name FluMist) is not a benefit for adults aged 21 or older. For more information on FluMist, please see the Centers for Disease Control Vaccine Information Statement at:

<http://www.cdc.gov/nip/publications/VIS/vis-flulive.pdf>

For clients under age 21, influenza vaccine reimbursement is limited to an Administration, Recordkeeping and Tracking (ART) fee of \$6.50 for private practitioners and \$2.00 for public health agencies. Because influenza vaccine is available at no cost through the Vaccines for Children (VFC) and Infant Immunization Programs, providers who choose to obtain vaccine from other suppliers may not request nor receive reimbursement in addition to the ART payment.

Free influenza vaccine is available through the VFC Program and the Colorado Infant Immunization Program for Medical Assistance Program-enrolled children (under age 21) meeting any of the following criteria:

- Children aged 6 months through 23 months
- Children and adolescents aged 6 months through 18 years with chronic disorders of the pulmonary or cardiovascular systems, including asthma
- Children and adolescents aged 2 through 18 years who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications or by HIV)
- Children and adolescents aged 2 through 18 years who are receiving long-term aspirin therapy and may therefore be at risk for developing Reye's Syndrome after influenza
- Children and adolescents aged 2 through 18 years who are residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- Adolescent females aged <19 years who will be pregnant during influenza season
- Children (6 months – 18 years) who have any condition (e.g., 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
- Children and adolescents aged 2 years through 18 years who are household contacts or out-of-home caregivers of persons in the following high-risk groups:
  1. Children less than 2 years old
  2. Adults aged 50 years or older
  3. Persons with chronic disorders of the pulmonary or cardiovascular systems, including asthma
  4. Persons who have required regular medical follow-up or hospitalization during the preceding year for chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications or by HIV)
  5. Children and adolescents ages 2 through 18 years who are receiving long-term aspirin therapy and may therefore be at risk for developing Reye syndrome after influenza
  6. Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
  7. Women who will be pregnant during influenza season
  8. Persons who have any condition (e.g., 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

For questions or additional information regarding the VFC Program, please contact Rosemary Spence at 303-692-2798

## Vaccine indications



Influenza immunization is strongly recommended for individuals who are six months of age or older and because of age or underlying medical conditions are at increased risk for complications of influenza. Health care workers and other contacts (including household contacts) of individuals in high-risk groups should also be vaccinated.

High-risk groups include:

- Children who meet the criteria for VFC influenza vaccine (see previous section)
- Persons 65 years of age and older
- Persons with chronic disorders of the pulmonary or cardiovascular systems, including asthma
- Persons who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications)
- Residents of nursing homes and other chronic-care facilities that house persons at any age who have chronic medical conditions

Flu vaccine may also be administered to individuals who wish to reduce the chance of becoming infected with influenza.

## Dosages

At risk children should receive vaccine in an age appropriate dosage (0.25 ml if age 6-35 months or 0.5 ml if age  $\geq$  3 years). Two doses of vaccine are recommended for children less than 9 years of age if they have not been previously vaccinated for influenza. The two doses should be administered at least one month apart and, if possible, the second dose should be given before December. *Note: Only one dose is necessary if a child has received one dose of influenza vaccine in any previous year.*

## Pediarix® Five-in-One Combination Vaccine

Pediarix®, produced by GlaxoSmithKline, is a five-in-one combination vaccine that protects against diphtheria, tetanus, pertussis, polio, and hepatitis B diseases. The vaccine is available through the VFC Program at the CDPHE.

On May 1, 2003, Pediarix® became a Colorado Medical Assistance Program benefit. All providers must use CPT code 90723 when billing for Pediarix®. Reimbursement is limited to the Administration, Recordkeeping and Tracking (ART) fee of \$6.50 for private practitioners and \$2.00 for public health agencies. Because Pediarix® is available at no cost through the VFC Program; providers who choose to obtain the vaccine from other suppliers may not request nor receive reimbursement in addition to the ART payment.

For more information on Pediarix® please visit the following website:

“Notice to Readers: FDA Licensure of Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Hepatitis B (Recombinant), and Poliovirus Vaccine Combined, (PEDIARIX®) for Use in Infants”  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5210a8.htm>

For questions about Pediarix®, please call:

Rosemary Spence at 303-692-2798 or Joni Reynolds, RNC, MSN at 303-692-2363



## Synagis Immune Globulin



Synagis (Palivizumab) is used to prevent serious lower respiratory tract disease caused by Respiratory Syncytial Virus (RSV) in pediatric patients at high risk for RSV disease. Synagis is administered by intramuscular injections, at 15 mg per kg of body weight, once a month during expected periods of RSV frequency in the community.

Synagis is a benefit of the Medical Assistance Program, and does not require Prior Authorization under the following circumstances:

- The client is under age 3 at the start of the current RSV season or at the time of the first injection for the current RSV season, with a chronic lung or respiratory condition, and was either full term or premature.
- The client was born prematurely, less than 28 weeks, and is under the age of 12 months at time of first injection, with or without a chronic lung or respiratory condition (e.g., ICD9 765.0).
- The client was born prematurely, 29-35 weeks, and is under the age of 6 months at time of first injection, with or without a chronic lung or respiratory condition (e.g., ICD9 765.1).

### Prior authorization is required for:

1. Children ages 3 or older at the start of each RSV season, or
2. Children who do not meet the above criteria but whose physician believes that they medically require Synagis.

The client's risk is increased due to one or more of the following conditions, as recommended by the American Academy of Pediatrics:

- Body Mass <5kg
- Congenital Heart Disease
- Low Socioeconomic Status
- T-cell immunodeficiency
- Passive smoke exposure
- Birth within 6 months before onset of RSV season
- Day care attendance
- Two or more individuals sharing a bedroom
- School age siblings
- Multiple births



Prior Authorization Requests (PARs) should be sent to:

PARs,  
P.O. Box 30  
Denver, CO 80201-0030.

For questions, providers may contact the fiscal agent's prior authorization line at  
303-534-0279 or 1-800-237-7647

A prior authorization is required for Synagis immune globulin administered at home. The prior authorization request must be called in to PDCS at 1-800-365-4944. When the prior authorization is approved, the pharmacy should bill the Medical Assistance Program electronically at point of sale. The client may pick up the prescription at the pharmacy.

Providers administering Synagis in the office must furnish the immune globulin and must use CPT code 90378 to bill Synagis on the CO 1500 or 837 professional claim form. Bill one unit per 50mg vial; limit 6 units per day. Providers may not ask clients to obtain Synagis from a pharmacy and bring it to the practitioner's office for administration. Outpatient hospitals should bill using the appropriate revenue code.

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**Please direct questions about Medical Assistance Program billing or the information in this bulletin to:**

**Medical Assistance Program Provider Services at:  
303-534-0146 or 1-800-237-0757 (Toll free Colorado)**

**Remember to check the Department's website at: <http://www.chcpf.state.co.us>  
For Provider Updates and News**



## Immunization Coding Quick Reference

Practitioners billing for immunizations to Medical Assistance Program-enrolled children (under age 21) when vaccine is available at no-cost through the Vaccines for Children and Infant Immunization Programs are paid an Administration Recordkeeping and Tracking (ART) fee of \$6.50 for each immunization.

Public health agencies billing for immunizations to Medical Assistance Program-enrolled children (under age 21) when vaccine is available at no-cost through the Vaccines for Children and Infant Immunization Programs are paid an Administration Recordkeeping and Tracking (ART) fee of \$2.00 for each immunization.

Medically necessary vaccines that are not provided to practitioners at no cost by the VFC or Infant Immunization Programs, are reimbursed using the following formula:

$$\text{Average Wholesale Price (AWP) + 10 percent + \$2.00 for administration}$$

### Key

Ig – immune globulin

INJ – jet injection

SQ – subcutaneous

IM – intramuscular

IV – intravenous

vacc – vaccine

Code	Description	Covered Ages “All” = all adults and children	VFC Program Benefit Ages 0-18	Infant Immunization Program Benefit Ages 19-20
<u>Immune Globulins</u>				
90281	Human Ig, IM	All		
90283	Human Ig, IV	All		
90287	Botulinum antitoxin, equine	All		
90288	Botulism Ig, IV	All		
90291	CMV Ig, IV	All		
90296	Diphtheria antitoxin, equine	All		
90371	Hep B Ig, IM	All		
90375	Rabies Ig, IM/SQ	All		
90376	Rabies Ig, heat-treated, IM/SQ	All		
90378	RSV Ig, IM, 50mg (Synagis)	0-2		
90379	RSV Ig, IV	0-2		
90384	Rh Ig, full-dose, IM	All		
90385	Rh Ig, mini-dose, IM	All		
90386	Rh Ig, IV	All		
90389	Tetanus Ig, IM	All		
90393	Vaccinia Ig, IM	All		
90396	Varicella-zoster Ig, IM	All		
90399	Unlisted immune globulin	All		
<u>Vaccines, Toxoids</u>				
90476	Adenovirus vacc, type 4, oral	All		
90477	Adenovirus vacc, type 7, oral	All		
90632	Hep A vacc, adult, IM	19+		√
90633	Hep A vacc, ped/adol, 2 dose, IM	0-18	√	
90636	Hep A & Hep B vacc adult, IM	19+		
90647	Hib vacc, PRP-OMP, 3 dose, IM	0-4	√	

Code	Description	Covered Ages "All" = all adults and children	VFC Program Benefit Ages 0-18	Infant Immunization Program Benefit Ages 19-20
90648	Hib vacc, PRP-T, 4 dose, IM	0-4	√	
90649	H papilloma vacc 3 dose, IM	Code 90649 is not a benefit at this time.		
90655	Flu vacc, 6-35 mo, preserv free, IM	0-2	√	
90656	Flu vacc, 3 yrs +, preserv free, IM	3+	√	√
90657	Flu vacc, 6-35 mo, IM	0-2	√	
90658	Flu vacc, 3 yrs +, IM	3+	√	√
90660	Flu vacc, live, intranasal	5-20	√	√
90669	Pneum conj vacc, polyval, < 5 yrs, IM	0-4	√	
90675	Rabies vacc, IM	All		
90700	DTaP vacc, < 7 yrs, IM	0-6	√	
90702	DT vacc, < 7 yrs, IM	0-6	√	
90703	Tetanus vacc, IM	All		
90704	Mumps vacc, SQ	All		
90705	Measles vacc, SQ	All		
90706	Rubella vacc, SQ	All		
90707	MMR vacc, SQ	All	√	√
90708	Measles-rubella vacc, SQ	All		
90710	MMRV vacc, SQ	Code 90710 is not a benefit at this time.		
90713	Poliovirus vacc, IPV, SQ, IM	All	√	√
90714	Td vacc, 7 yrs +, preserv free, IM	7+	√	√
90715	Tdap vacc, 7 yrs +, IM	7+	√	√
90716	Varicella (chicken pox) vacc, SQ	All	√	√
90718	Td vacc, 7 yrs +, IM	7+	√	√
90719	Diphtheria vacc, IM	All		
90721	DTaP/Hib vacc, IM	0-6		
90723	DTaP-Hep B-IPV vacc, IM	0-6	√	
90732	Pneum polysacc vacc, 23 valent, adult or ill pat, SQ/IM	2+		
90733	Meningococcal polysacc vacc, SQ	All		
90734	Meningococcal conj vacc, serogrp A, C, Y, W-135, IM	2+		
90735	Encephalitis vacc, SQ	All		
90736	Zoster vacc, SQ	Code 90736 is not a benefit at this time.		
90740	Hep B vacc, ill pat, 3 dose, IM	All	√	√
90743	Hep B vacc, adol, 2 dose, IM	11-15		
90744	Hep B vacc, ped/adol, 3 dose, IM	0-18	√	
90746	Hep B vacc, adult, IM	20+		√
90747	Hep B vacc, ill pat, 4 dose, IM	All	√	√
90748	Hep B/Hib vacc, IM	0-4	√	
90749	Unlisted vaccine/toxoid	All		
S0195	Pneum conj, polyvalent, IM, 5-9 yrs with no previous dose	5-9	√	



# 2005 Summary of ACIP/AAP/AAFP Childhood and Adolescent Immunization Recommendations

Colorado Department of Public Health and Environment/Colorado Clinical Guidelines Collaborative

## Children Beginning Immunization In Infancy (please see notes on back)

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2004, for children through age 18 years. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations. **[Bars]** indicate range of recommended ages for immunization. Any dose not given at the recommended age should be administered as a "catch-up" immunization at any subsequent visit when indicated and feasible. **(Ovals)** indicate vaccines to be given if previously recommended doses were missed or given earlier than the recommended minimum age. These groups warrant special effort to administer those vaccines not previously administered.

Vaccine ▼	Age ►	Birth	1 Month	2 Months	4 Months	6 Months	12 Months	15 Months	18 Months	24 Months	4-6 Years	11-12 Years	13-18 Years
		Hepatitis B <sup>1</sup>	Hep B #1	Hep B #2		Hep B #3		Hep B series					
Diphtheria, Tetanus, Pertussis <sup>2</sup>			DTaP	DTaP	DTaP	DTaP	DTaP	DTaP	DTaP	DTaP	Td	Td	Td
<i>Haemophilus influenzae</i> type b <sup>3</sup>			Hib	Hib	Hib	Hib	Hib	Hib	Hib	Hib	Hib	Hib	Hib
Inactivated Polio			IPV	IPV	IPV	IPV	IPV	IPV	IPV	IPV	IPV	IPV	IPV
Measles, Mumps, Rubella <sup>4</sup>						MMR #1	MMR #1	MMR #1	MMR #1	MMR #1	MMR #2	MMR #2	MMR #2
Varicella <sup>5</sup>						Var	Var	Var	Var	Var	Var	Var	Var
Pneumococcal <sup>6</sup>			PCV	PCV	PCV	PCV	PCV	PCV	PCV	PCV	PPV	PPV	PPV
Influenza <sup>7</sup>						Influenza (yearly)	Influenza (yearly)	Influenza (yearly)	Influenza (yearly)	Influenza (yearly)	Influenza (yearly)	Influenza (yearly)	Influenza (yearly)
Hepatitis A <sup>8</sup>										Hep A series	Hep A series	Hep A series	Hep A series

Vaccines below this line are for selected populations

### For Updated Information on MCV4 (Menactra) and Tdap (Boostrix and ADACEL)

Visit the CCGC website at [www.coloradoguidelines.org](http://www.coloradoguidelines.org)  
or the CDPHE website at [www.cdphe.state.co.us/dc/immunization](http://www.cdphe.state.co.us/dc/immunization).

### Accelerated Schedule For Children And Adolescents Aged <7 Years Who Start The Series Late Or Are More Than 1 Month Behind

Visit	Vaccine doses
1st visit (at least 4 months of age)	Hep B #1, DTaP #1, Hib <sup>a</sup> , IPV #1, PCV <sup>b</sup> , MMR and Var (as soon as child is 12 months), Hep A (as soon as child is 24 months), Influenza (≥8-23 months)
4-8 weeks after 1st visit	Hep B #2, DTaP #2, Hib <sup>a</sup> , IPV #2, PCV <sup>b</sup>
4-8 weeks after 2nd visit	DTaP #3, Hib <sup>a</sup> , IPV #3, PCV <sup>b</sup>
6 months after 1st visit	Hep B #3, Hep A #2
6 months after 3rd visit	DTaP #4, Hib <sup>a</sup>
Age 4-6 years (before school entry)	DTaP #5 <sup>c</sup> , IPV #4 <sup>c</sup> , MMR #2 (at least 4 weeks after MMR #1)
Age 11-16 years	Td

a. Immunologically normal children aged ≥5 years do not need Hib vaccine. If infant starts series at age 7-11 months, give 2 doses 2 months apart and booster dose at 12-15 months. If infant starts at age 12-14 months, give 1st dose. Give 2nd (and last) dose at least 2 months later. If child starts at age 15 months to 4 years, give just one dose.

b. Immunologically normal children aged ≥5 years do not need PCV vaccine. If infant starts series at age 2-6 months, give 3 doses, 2 months apart and booster dose at 12-15 months. If infant starts series at 7-11 months, give 2 doses, 2 months apart and booster dose at 12-15 months. If infant starts at 12-23 months, give 2 doses, 2 months apart. If healthy child starts series at age 24-59 months, give just one dose. (See *MMWR Oct. 6, 2000*;49(RR-9):1-35.)

c. The US Public Health Service and the AAP consider DTaP #5 and IPV #4 necessary unless the DTaP #4 and IPV #3 were given after the fourth birthday. If OPV and IPV were administered as part of a series, a total of 4 doses should be given regardless of the child's current age.

### Accelerated Schedule For Children And Adolescents Aged ≥7 Years Who Start The Series Late

Visit	Vaccine doses
1st visit	Hep B #1, Td #1, IPV #1 <sup>a</sup> , MMR #1, Var #1, Hep A #1
4-8 weeks after 1st visit	Hep B #2, Td #2, IPV #2 <sup>a</sup> , MMR #2, Var #2 (if ≥13 years)
6 months after 1st visit	Hep B #3, Hep A #2, IPV #3 <sup>a</sup>
6 months after 2nd visit	Td #3
6 months after 3rd Td	Td

a. Vaccine is not generally recommended for those aged ≥18 years.

### Minimum Intervals Between Vaccine Doses For Children Who Have Delayed Immunizations

Vaccine	Dose 1-2	Dose 2-3	Dose 3-4
Hep B	4 Weeks	8 Weeks*	
IPV	4 Weeks	4 Weeks	4 Weeks
Hib			
HbOC	4 Weeks	4 Weeks	***
PRP-T	4 Weeks	4 Weeks	***
PRP-OMP	4 Weeks	***	
Td	4 Weeks	6 Months**	
MMR	4 Weeks***		
Hep A	6 Months		
Var	4 Weeks		
PCV	4 Weeks****	4 Weeks	8 Weeks*****

\*This final dose is recommended at least 4 months after the first dose and no earlier than age 6 months.

\*\*6 months if first dose given at age <12 months and current age <11 years. 5 years if first dose given at ≥12 months and third dose given at age <7 years and current age ≥11 years. 10 years if third dose given at age ≥7 years. For children aged 7-10 years, the interval between the third and booster dose is determined by the age when the first dose was administered. For adolescents aged 11-18 years, the interval is determined by the age when the third dose was given.

\*\*\*The second dose of MMR is recommended routinely at age 4-6 years but may be administered earlier if desired.

\*\*\*\*Hib booster dose should be administered no earlier than 12 months of age and at least 2 months after the previous dose of Hib vaccine.

\*\*\*\*\*For children vaccinated at age <1 year, minimum interval is 4 weeks. Booster dose should be administered ≥8 weeks after primary series is completed. Minimum interval for children receiving doses at age ≥1 year is 8 weeks.

The above table shows the minimum intervals acceptable between doses of vaccine. All vaccines should be administered as close to the recommended schedule as possible in order to maximize the. There is no need to restart a vaccine series regardless of the time that has elapsed between doses.

NOTES

<sup>1</sup>Hepatitis B vaccine (Hep B): All infants should receive the first dose of Hep B soon after birth and before hospital discharge; the first dose may also be administered by age 2 months if the mother is Hepatitis B surface antigen (HBsAg) negative. Only monovalent Hep B may be used for the birth dose. Monovalent or combination vaccine containing Hep B may be used to complete the series. Four doses of vaccine may be administered when a birth dose is given. The second dose should be given at least 4 weeks after the first dose, except for combination vaccines which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 24 weeks.

Infants born to HBsAg-positive mothers should receive Hep B vaccine and 0.5 mL Hep B immune globulin (HBIG) at separate sites within 12 hours of birth. The 2nd dose is recommended at age 1–2 months. The final dose in the immunization series should not be administered before age 24 weeks. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9–15 months.

Infants born to mothers whose HBsAg status is unknown or others at high risk (e.g., Alaskan Native and Asian-Pacific Islander children and children born to first-generation immigrants from Hep B virus infection-endemic areas) should receive the first dose of the Hep B vaccine series within 12 hours of birth. Maternal blood should be drawn at the time of delivery to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1–2 months. The last dose in the immunization series should not be administered before age 24 weeks.

All children and adolescents who have not been immunized against Hep B may begin the series during any visit. Special effort should be made to immunize children who were born in or whose parents were born in areas of the world with moderate or high endemicity of Hep B virus infection.

<sup>2</sup>Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP): The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15–18 months. The final dose in the series should be given at age ≥4 years.

Tetanus and diphtheria toxoids vaccine (Td) is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

<sup>3</sup>Haemophilus influenzae type b conjugate vaccines (Hib): Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB<sup>®</sup> or ComVax<sup>®</sup> [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. Because clinical studies in infants have demonstrated that using some combination products may induce a lower immune response to the Hib vaccine component, DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4, or 6 months (unless FDA-approved for these ages) but can be used as boosters after any Hib vaccine. The final dose in the series should be administered at age ≥12 months.

<sup>4</sup>Measles, mumps, and rubella vaccine (MMR): The second dose of MMR vaccine is recommended routinely at age 4–6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by age 11–12 years.

<sup>5</sup>Varicella vaccine (Var): Var is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox, as judged by a health care provider, and have not been immunized). Susceptible persons aged ≥13 years should receive 2 doses administered at least 4 weeks apart.

<sup>6</sup>Pneumococcal vaccines: Heptavalent pneumococcal conjugate vaccine (PCV) is recommended for all children aged 2–23 months and for certain children aged 24–59 months.

Pneumococcal polysaccharide vaccine (PPV) is recommended in addition to PCV for certain high-risk groups. (See MMWR 2000;49(RR-9):1–35.)

<sup>7</sup>Influenza vaccine: Influenza vaccine is recommended annually for children aged ≥6 months with certain risk factors (including but not limited to asthma, cardiac disease, sickle cell disease, HIV, and diabetes), healthcare workers, and other persons (including household members) in close contact with persons in groups at high risk (see MMWR 2004;53(RR-6):1–40). In addition, healthy children aged 6–23 months and close contacts of healthy children aged 0–23 months are recommended to receive influenza vaccine (unless contraindications are present) because children in this age group are at substantially increased risk for influenza-related hospitalizations. For healthy persons aged 5–49 years, the intranasally administered, live, attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV) (see MMWR 2004;53(RR-6):1–40). Children receiving TIV should be administered a dosage appropriate for their age (0.25 mL if 6–35 months or 0.5 mL if ≥3 years). Children aged ≥8 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by at least 4 weeks for TIV and at least 6 weeks for LAIV).

<sup>8</sup>Hepatitis A vaccine (Hep A): Hep A vaccine is recommended for children and adolescents in selected states and regions and for certain high-risk groups. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against Hep A can begin the Hep A immunization series during any visit. The 2 doses in the series should be administered at least 6 months apart. (See MMWR 1999;48(RR-12):1–37.) Please note: Colorado is considered a state with intermediate risk for the disease. Vaccination should be considered for all children aged ≥24 months.

Immunization Program Resources



Colorado Department of Public Health and Environment

General Immunization Questions: (303) 692-2650

Vaccine Orders: (303) 692-2796

Vaccines for Children (VFC) Program: (303) 692-2798

Hepatitis B Project: (303) 692-2673

Disease Reports: 1-800-866-2759

Vaccine Adverse Event Reporting System (VAERS): (303) 692-2732

Clinically significant adverse events that follow immunization should be reported to VAERS.

Vaccine Information Statements (VIS):

<http://www.cdc.gov/nip/publications/vis>

Family Healthline (Parent Information):

(303) 692-2229 (Denver metro area) or 1-800-688-7777

Website: <http://www.cdph.state.co.us/dc/immunization>



Background

The Colorado Clinical Guidelines Collaborative was formed in 1996 to address the challenges for the use and implementation of clinical guidelines across health care systems in Colorado. Current membership represents 50 health care organizations.

Mission Statement

CCGC is a Colorado coalition of healthcare stakeholders (health plans, physicians, hospitals, employers, government agencies, quality improvement organizations and other entities) working collaboratively to implement systems and processes, using evidenced-based clinical guidelines to improve healthcare outcomes in Colorado.