



Colorado Children's  
Immunization Coalition

# Immunization Update:

*What's New in 2013?*

*Thursday, August 15, 2013*

*11:30 a.m. – 12:30 p.m.*

*Presented by:*

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# Immunization Update:

## What's New in 2013

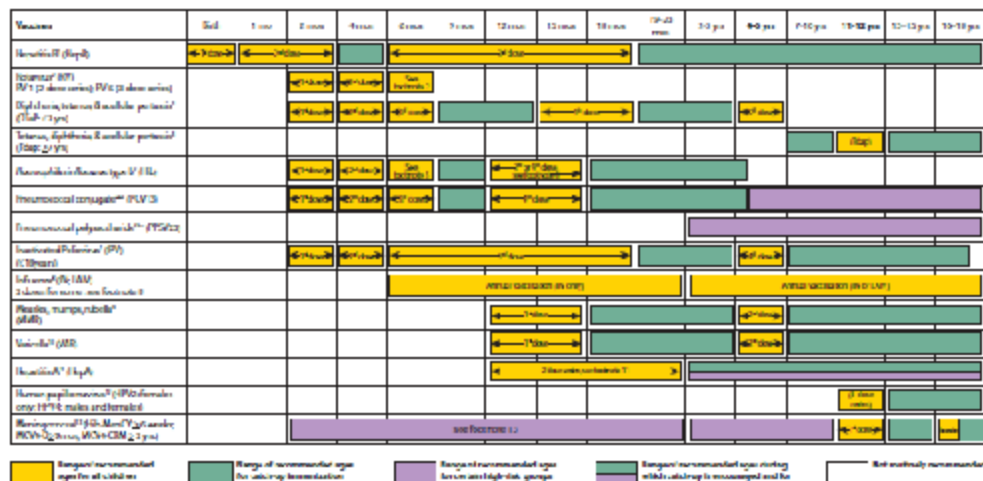
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# Immunization (IZ) Schedules 2013

- Two pediatric schedules merged into one
  - <http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-schedule.pdf>
    - Wording added to represent number of doses
    - MCV4 bar changed to reflect licensure of Hib-MenCY vaccine
    - Influenza abbreviations updated to include quadrivalent vaccine
    - Changes in recommendations for MCV4, Tdap, pneumococcal and influenza vaccines

**Figure 1. Recommended immunization schedule for persons aged 0 through 18 years – 2013.**  
**FOR THOSE WHO FALL BEHIND UNUSUAL LATE-SEE (OR CATCH-UP SCHEDULE) (FIGURE 2)**

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bar in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). For one-time and subsequent vaccine age groups are in bold.



This schedule includes recommendations in effect as of January 1, 2013. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine is preferred over separate injections of its equivalent component vaccines. For routine vaccination, use the vaccine Advisory Committee on Immunization Practices (ACIP) database to determine recommended ages and intervals at <http://www.cdc.gov/vaccines/imzinfos/immunization-practices/index.html>. Check regularly for updates to these events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (<http://vaers.hhs.gov>) or by telephone (800-332-7382). Suspected case of vaccine-preventable disease should be reported to the state or local health department. Additional information, including procedures and contact information for vaccination, is available from CDC online (<http://www.cdc.gov/vaccines/imzinfos/>) or by telephone (800-CDC-INFO (800-232-6296)).

This schedule is approved by the Advisory Committee on Immunization Practices (<http://www.acip.hhs.gov/acip/index.html>), the American Academy of Pediatrics (<http://www.aap.org>), the American Academy of Family Physicians (<http://www.aafp.org>), and the American College of Obstetricians and Gynecologists (<http://www.acog.org>).

**NOTE:** The above recommendations must be read along with the footnotes of this schedule.

#### Footnotes — Recommended immunization schedule for persons aged 0 through 18 years—United States, 2013

For further guidance on the use of the vaccines mentioned below, see <http://www.cdc.gov/vaccines/pubs/acio-1st.htm>.

- Hepatitis B (HepB) vaccine. (Minimum age: birth)**  
**At birth**
  - Administer monovalent HepB vaccine to all newborns before hospital discharge.
  - For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and (if used) at least 1 month (minimum 28 days) after birth. These infants should also be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after completion of the last vaccine dose at age 9 through 14 months (probability of the next vaccine dose).
  - If mother's HBsAg status is unknown, test at 12 weeks of birth. Administer HepB vaccine to all infants who test positive for HBsAg. If mother's HBsAg status is unknown, test at 12 weeks of birth. Administer HepB vaccine to all infants who test positive for HBsAg. Administer HBsAg for infants weighing >2,000 grams (no later than age 1 week).**Loose following the birth dose**
  - The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
  - Infants who did not receive a birth dose should receive a dose of a HepB-containing vaccine on a schedule of 1, 1 to 2 months, and 6 months (as soon as feasible, see Figure 2).
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of HepB vaccine is recommended when a combination vaccine containing HepB is administered after the birth dose.**Catch-up vaccination**
  - Unvaccinated persons should complete a 3-dose series.
  - At 12 weeks of age, if the first dose was given at age 1 month, the second dose should be given at age 2 months, and the third dose should be given at age 6 months.
- Polio vaccine (IPV vaccine). (Minimum age: 6 weeks for both IPV-1 [tetanus] and IPV-2 [polio])**  
**Routine vaccination**
  - Administer 4 doses of IPV vaccine to all infants at 12 weeks, 4 months, 6 months, and 18 months of age.
  - IPV-1 is used for the first 3 doses and IPV-2 is used for the fourth dose.
  - If the dose is given at 12 weeks, the second dose should be given at 4 months, and the third dose should be given at 6 months.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 12 weeks of age.
  - Vaccination should not be initiated for infants aged 12 weeks or older.
  - The maximum age for the first two doses is 6 months of age.
  - IPV-1 is used for the first two doses and IPV-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Diphtheria, tetanus, and pertussis (DTaP) vaccine. (Minimum age: 6 weeks)**  
**Routine vaccination**
  - Administer 5 doses of DTaP vaccine to all children at 2, 4, 6, 15-18 months, and 4-6 years of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 5 doses of DTaP vaccine is recommended when a combination vaccine containing DTaP is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 12 weeks of age.
  - Vaccination should not be initiated for infants aged 12 weeks or older.
  - The maximum age for the first two doses is 6 months of age.
  - DTaP-1 is used for the first two doses and DTaP-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Measles, mumps, rubella (MMR) vaccine. (Minimum age: 12 months)**  
**Routine vaccination**
  - Administer 2 doses of MMR vaccine to all children at 12 months and 4-6 years of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of MMR vaccine is recommended when a combination vaccine containing MMR is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 12 months of age.
  - Vaccination should not be initiated for infants aged 12 months or older.
  - The maximum age for the first two doses is 12 months of age.
  - MMR-1 is used for the first two doses and MMR-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Varicella (VAR) vaccine. (Minimum age: 12 months)**  
**Routine vaccination**
  - Administer 2 doses of VAR vaccine to all children at 12 months and 4-6 years of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of VAR vaccine is recommended when a combination vaccine containing VAR is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 12 months of age.
  - Vaccination should not be initiated for infants aged 12 months or older.
  - The maximum age for the first two doses is 12 months of age.
  - VAR-1 is used for the first two doses and VAR-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Human papillomavirus (HPV) vaccine. (Minimum age: 9 years)**  
**Routine vaccination**
  - Administer 3 doses of HPV vaccine to all children at 9, 11-12, and 15-18 years of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of HPV vaccine is recommended when a combination vaccine containing HPV is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 9 years of age.
  - Vaccination should not be initiated for children aged 9 years or older.
  - The maximum age for the first two doses is 12 months of age.
  - HPV-1 is used for the first two doses and HPV-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Meningococcal conjugate (PCV13) vaccine. (Minimum age: 2 months)**  
**Routine vaccination**
  - Administer 2 doses of PCV13 vaccine to all children at 2 and 4 months of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of PCV13 vaccine is recommended when a combination vaccine containing PCV13 is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 2 months of age.
  - Vaccination should not be initiated for children aged 2 months or older.
  - The maximum age for the first two doses is 12 months of age.
  - PCV13-1 is used for the first two doses and PCV13-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Meningococcal polysaccharide (PPSV23) vaccine. (Minimum age: 2 months)**  
**Routine vaccination**
  - Administer 1 dose of PPSV23 vaccine to all children at 12 months of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 2 doses of PPSV23 vaccine is recommended when a combination vaccine containing PPSV23 is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 12 months of age.
  - Vaccination should not be initiated for children aged 12 months or older.
  - The maximum age for the first two doses is 12 months of age.
  - PPSV23-1 is used for the first two doses and PPSV23-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Influenza (Flu) vaccine. (Minimum age: 6 months)**  
**Routine vaccination**
  - Administer 2 doses of Flu vaccine to all children at 6 months and 12 months of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of Flu vaccine is recommended when a combination vaccine containing Flu is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 6 months of age.
  - Vaccination should not be initiated for children aged 6 months or older.
  - The maximum age for the first two doses is 12 months of age.
  - Flu-1 is used for the first two doses and Flu-2 is used for the third dose.
  - For other catch-up series, see Figure 2.
- Shingles (Shingrix) vaccine. (Minimum age: 50 years)**  
**Routine vaccination**
  - Administer 2 doses of Shingrix vaccine to all children at 50 and 60 years of age.
  - The minimum interval between doses 1 and 2 is 4 weeks and between doses 2 and 3 is 8 weeks. The final third-dose booster dose of the vaccine should be administered no earlier than age 16 weeks and at least 16 weeks after the first dose.
  - Administration of a total of 3 doses of Shingrix vaccine is recommended when a combination vaccine containing Shingrix is administered after the birth dose.**Catch-up vaccination**
  - The minimum age for the first dose in the catch-up series is 50 years of age.
  - Vaccination should not be initiated for children aged 50 years or older.
  - The maximum age for the first two doses is 12 months of age.
  - Shingrix-1 is used for the first two doses and Shingrix-2 is used for the third dose.
  - For other catch-up series, see Figure 2.

# New IZ Recommendations

- Tdap
  - One dose for children age 7-10 with an incomplete DTaP series (no current recommendation for an additional dose at age 11-12)
  - One dose for pregnant woman including teens during EACH pregnancy – ideally at 27-36 weeks (if woman has one dose of Tdap and the additional dose is not given during the pregnancy, no recommendation to give an additional dose after delivery)

# New IZ Recommendations

- Hib not routinely recommended for anyone older than five, but some high risk patients 5 and older should be given one dose
- PCV13 should be given to unvaccinated high risk children 6-18
- Some high risk children 2 years and older need both PCV13 and PPSV23. The PCV13 should be given first, with PPSV23 following at least 8 weeks later

# New IZ Recommendations

- Meningococcal conjugate vaccines (MCV)
  - Minimum ages differ
    - Hib-MenCY minimum age is 6 weeks
      - Routine age (high risk children) 2, 4, 6 and 12-15 mo
      - Asplenia, complement deficiency, immune deficiency
    - Menactra minimum age is 9 months
      - Travelers, unvaccinated high risk children
    - Menveo minimum age is 2 years
      - Travelers, unvaccinated high risk children

Two dose now recommended for adolescents

# 13-14 Influenza

- Several new vaccines and abbreviations
  - TIV has been replaced by IIV (inactivated influenza vaccine)
  - RIV is recombinant hemagglutinin influenza vaccine
  - LAIV is live, attenuated influenza vaccine



# 13-14 Flu Vaccines

Vaccine	Company	Age Indication	Route	Abbreviation
Afluria®	CSL Limited	≥ 9 years	IM	IIV3
Fluarix®	GlaxoSmithKline	≥ 3 years	IM	IIV3
Flucelvax®§§§	Novartis Vaccines	≥ 18 years	IM	IIV3
FluLaval®	ID Biomedical	≥ 18 years	IM	IIV3
Fluvirin®	Novartis Vaccines	≥ 4 years	IM	IIV3
Fluzone®	Sanofi Pasteur	≥ 6 months	IM	IIV3
Fluzone® Intradermal <sup>§</sup>	Sanofi Pasteur	18-64 years	ID	IIV3
Fluzone® High-Dose**	Sanofi Pasteur	≥ 65 years	IM	IIV3
Fluarix® Quadrivalent	GlaxoSmithKline	≥ 3 years	IM	IIV4
FluBlok®	Protein Sciences	18-49 years	IM	RIV3
FluMist® Quadrivalent <sup>††</sup>	Med Immune	2 - 49 years	IN	LAIV4

# Other News

- ACIP will expand the “Preventing and Managing Adverse Reactions” section of the 2016 General Recommendations
  - Majority of questions to CDC in this area
- Syncope still most commonly reported after HPV4 given to adolescents
  - Adherence to a 15-minute observation period is recommended
- Use of acetaminophen before or at vaccine administration is no longer encouraged. It can still be used to treat pain or fever if they occur.

# Vaccine Administration

- Draw up vaccines immediately prior to administration – use correct route & site
- Never mix vaccines unless they are produced to do so
- Never administer a vaccine after the expiration date
- Record vaccine lot numbers for each injection
- If errors occur, take immediate corrective action

# Vaccine Timing and Spacing

- All vaccines have minimum ages, and minimum intervals between doses
- Administering all vaccines the child is eligible for is safe, and the best way to ensure the child remains UTD
- Good documentation is critical
- Use of CIMS provides both data and documentation of important immunizations

# Contraindications & Precautions

- Contraindication – a condition that increases the chance of a serious, adverse reaction
- Precaution – a condition that may increase risk of a serious side effect or render the vaccine less effective. Weigh risk vs benefit
- SCREEN all patients before administering each dose of vaccine

# Storage & Handling

- Understand and follow the recommendations for storage of each vaccine
- Inspect vaccine upon receipt, and assure the cold chain
- Rotate vaccines to use vaccines that expire soonest, and ensure no vaccine is given after it expires
- Have written policies so all staff know how to correctly store vaccines, and what to do in the case of an emergency or break in the cold chain

# Communication

- Screen each patient before immunization
- Provide a VIS for each vaccine and for each dose
- Make a clear recommendation
- Be ready to answer questions and provide resources
- Most parents vaccinate, but appreciate hearing that they are doing a good thing

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<http://vacunalosporsubien.com>



# Vaccines for Children (VFC) Update:

What's New in 2013



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Colorado Department  
of Public Health  
and Environment

*Immunization Section*

# VFC Update



- **Vaccines for Children Program:**
  - Uses federal purchasing power to provide low or no-cost immunizations to eligible children
  - VFC Eligible: 18 years or younger who are:
    - ✦ On Medicaid, uninsured, or are American Indian/Alaskan Native
    - ✦ Underinsured can get VFC vaccine at FQHCs/RHCs or local public health agencies
- **2012 – over 1 million doses valued at \$43 million**

# About the VFC Program



- **VFC is a Federal Entitlement Program**
  - Requirements to participate in the program
  - Aligns with immunization standards and best practices.
    - ✦ Follow ACIP schedule appropriate timing and spacing
    - ✦ Vaccine administration and documentation including VIS use
      - use CIIS
    - ✦ Screen for contraindications and precautions
    - ✦ Storage and Handling – new requirements/recommendations

# VFC Storage Requirement



## **REQUIREMENT:**

- **Dormitory style refrigerators are not allowed, not even for temporary storage.**

# Storage Recommendations



**RECOMMENDATIONS:** (these often become requirements)

- Stand alone refrigerator and freezer units are recommended.
- Combination household units – only use the refrigerator unit and do not store vaccines on the top shelf or bottom.

# What kind of refrigerator should I use?

## Household, consumer-grade units

### Freezerless



### Dual-zone



## Pharmaceutical-grade units

### Under-the-counter



### Full-sized



Dual-zone unit is acceptable for refrigerated vaccine storage only – do not use freezer compartment

# Acceptable Freezers



**Chest Freezer**



**Undercounter  
Freezer**



**Countertop  
Freezer**

# VFC Handling Requirement



## **REQUIREMENT:**

- Use calibrated thermometers to measure temperatures in refrigerator and freezer units



# New VFC Handling Recommendation



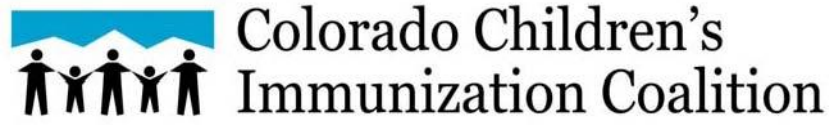
## **RECOMMENDATIONS:**

- **Digital thermometer with probe in glycol**
  - Better estimates vaccine temperature instead of ambient air temperature.
- **Continuous temperature monitoring**
  - Data loggers that record temperatures over time.
  - Provides detailed information on the length of time vaccine was at out of range temperatures.

# New VFC Handling Recommendation



- **Immunization Section awarded 2 year grant to implement new recommendations in Colorado**
  - Looking for providers to test different loggers
  - If interested please contact...
- **Debra Zambrano, VFC Clinical Coordinator**
  - 303-692-2258



**Questions for Lynn about  
immunizations or what's new in 2013 ?**

**Questions for Deb about  
the Vaccines for Children Program?**

***Please type questions into your chat box!***



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*Thank you for attending*

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