**Protocol for Administration of the****13-Valent Pneumococcal Conjugate Vaccine (PCV13)**

**Precautions and Contraindications**

Screen all patients for precautions and contraindications to immunization.

**Indications and Usage**

The 13-valent pneumococcal conjugate vaccine (PCV13) is indicated for active immunization for the prevention of invasive pneumococcal disease [IPD] caused by the 13 serotypes covered by the vaccine and is indicated for prevention of otitis media caused by serotypes in the original 7-valent pneumococcal conjugate vaccine (PCV7). PCV13 replaces PCV7 and provides protection against 13 pneumococcal serotypes (i.e., 6 more serotypes than PCV7).

PCV13 is recommended to be administered before PPSV23 [the 23-valent pneumococcal vaccine] among persons for whom both vaccines are recommended,  
<http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf>   
<http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf>.

**Recommended Schedule**

The 13-valent pneumococcal conjugate vaccine (PCV13) is recommended by the Advisory Committee on Immunization Practices (ACIP) for:

* Routine vaccination of all children aged 2 through 59 months with PCV13
  + Administer a 4-dose series of PCV13 vaccine at ages 2, 4 and 6 months and   
    at age 12 through 15 months (Table 1).
  + Administer fewer doses to unvaccinated children, aged 7 months or older (Table 2).
  + Complete the vaccine series for children who have received one or more doses of   
    7-valent PCV (PCV7) vaccine. For children aged 12 through 59 months who have received an age-appropriate series PCV7, administer a single supplemental dose of PCV13 (Table 2).
* Routine use of PCV13 is not recommended for healthy children aged 5 years and older
* Routine vaccination of all persons aged 65 years and older who have not previously received pneumococcal vaccine or whose previous vaccination history is unknown
  + Administer a dose of PCV13 first, followed in series by a dose of PPSV23.  
    See Box 1 and Table 3 below. The two vaccines should not be co-administered.
    - The dose of PPSV23 should be given at least 1 year after a dose of PCV13 for immunocompetent adults aged 65 years and older. If a dose of PPSV23 is inadvertently given earlier than the recommended interval, the dose need not be repeated.
    - The interval between doses of PCV13 and PPSV23 should be 8 weeks or greater for adults aged 65 years and older with immunocompromising conditions, functional or anatomic asplenia, cerebrospinal fluid leaks, or cochlear implants.
* Routine use of PCV13 among adults aged 65 years and older who had previous vaccination with PPSV23 at age 65 years and older.
  + Adults aged 65 years and older who have previously received one or more doses of PPSV23 also should receive a dose of PCV13 if they have not yet received it.
  + A dose of PCV13 should be given at least 1 year after receipt of the most recent dose of PPSV23.
* Routine use of PCV13 among adults aged 65 years and older who had previous vaccination with PPSV23 before age 65 years who are now aged 65 years and older.
  + Adults aged 65 years and older who have previously received one or more doses of PPSV23 also should receive a dose of PCV13 if they have not yet received it. A dose of PCV13 should be given at least 1 year after receipt of the most recent dose of PPSV23.
  + For those for whom an additional dose of PPSV23 is indicated, this subsequent dose of PPSV23 should be given at least 1 year after PCV13 and at least 5 years after the most recent dose of PPSV23.
* Vaccination of children aged 60 through 71 months withunderlying medical conditions that increase their risk of pneumococcal disease or complications\*\* (See Table 4 below)
* Routine vaccination of children aged 6 through 18 years who are at increased risk for invasive pneumococcal disease because of anatomic or functional asplenia, including sickle cell disease (SCD), HIV-infection or other immunocompromising condition, cochlear implant, or cerebrospinal fluid leak who have not previously received PCV7.
  + This recommendation [by ACIP] reflects a policy change from permissive and off-label recommendation of PCV13 for children aged 6 to 18 years with immunocompromising conditions, functional or anatomic asplenia, CSF leaks or cochlear implants to a category A recommendation  
    <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6225a3.htm>.
  + **PPSV23-naïve children**. ACIP recommends that children aged 6–18 years who have not received PCV13 and are at increased risk for IPD because of anatomic or functional asplenia (including SCD), HIV infection, cochlear implant, CSF leak, or other immunocompromising conditions receive a single PCV13 dose first, followed ≥8 weeks later by a dose of PPSV23.
    - A second PPSV23 dose is recommended 5 years after the first PPSV23 dose for children with anatomic or functional asplenia (including SCD), HIV infection, or other immunocompromising conditions
  + **Previous vaccination with PPSV23**. Children aged 6–18 years who have not received PCV13; are at increased risk for IPD because of anatomic or functional asplenia, including SCD, HIV infection, CSF leaks, cochlear implants, or other immunocompromising conditions; and who previously received ≥1 doses of PPSV23 should be given a single PCV13 dose ≥8 weeks after the last PPSV23 dose, even if they have received PCV7.
* If a second PPSV23 dose is indicated, it should be given ≥5 years after the first PPSV23 dose. These children should not receive more than two doses of PPSV23 before age 65 years.
* Vaccination of adults aged 19 years and older with immunocompromising conditions (including chronic renal failure and nephrotic syndrome), functional or anatomic asplenia, cerebrospinal fluid (CSF) leaks, or cochlear implants.\*\* PCV13 should be administered to eligible adults in addition to PPSV23.
  + Recommendation for the use of PCV13 among pneumococcal vaccine naïve individuals:
    - Adults aged 19 years and older with immunocompromising conditions (including chronic renal failure and nephrotic syndrome), functional or anatomic asplenia, CSF leaks, or cochlear implants, and who have not previously received PCV13 or PPSV23, should receive a single dose of PCV13 first followed by a dose of PPSV23 at least 8 weeks later (See Table 5).
    - Subsequent doses of PPSV23 should follow current PPSV23 recommendations for these adults at high risk. Specifically, a second PPSV23 dose is recommended 5 years after the first PPSV23 dose for persons aged 19 through 64 years with functional or anatomic asplenia and for persons with immunocompromising conditions. Persons with CSF leaks or cochlear implants should receive no additional doses of PPSV23 until age 65 years.
    - Additionally, those who received 1 or 2 doses of PPSV23 before age 65 years for any indication should receive another dose of the vaccine at age 65 years or later if at least 5 years have elapsed since their previous PPSV23 dose.
  + Recommendations for the use of PCV13 among adults who have previously been vaccinated with PPSV23:
    - Adults aged 19 years and older with immunocompromising conditions, functional or anatomic asplenia, CSF leaks, or cochlear implants, who previously have received one or more doses of PPSV23 should be given a dose of PCV13 one or more years after the last PPSV23 dose was received. For those who require additional doses of PPSV23 (see Table 5), the first such dose should be given no sooner than 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.

[\*\*Note that these ACIP recommendations differ from those in the PCV13 Package Insert]

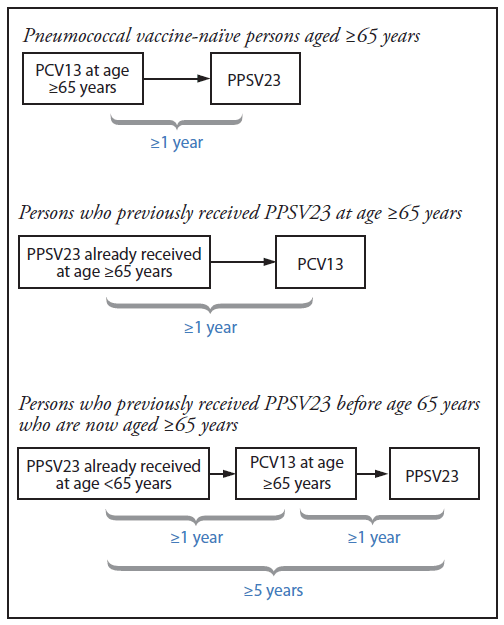
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| **TABLE 1. PCV13 Vaccine Schedule for Children Aged 2 through 59 months, unless a contraindication** | | |
| **Recommended Age** | **Dose** | **Recommended interval to next dose**1 |
| 2 months | 1 | Minimum age for dose 1 is 6 weeks |
| 4 months | 2 | 8 weeks (minimum of 4 weeks) from dose 1 |
| 6 months | 3 | 8 weeks (minimum of 4 weeks) from dose 2 |
| 12 through 15 months | 4 | Child must be aged 12 to 15 months or at least 8 weeks after dose 3. |

1The recommended interval between doses is eight weeks, but may be as short as four weeks.

| **TABLE 2: Recommended schedules for administering doses of PCV13 among children who have not previously received PCV7 or PCV13 and those incompletely vaccinated with PCV7 or PCV13 for age and supplemental PCV13 immunization**  [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5911a1.htm](https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/us-vaccines.pdf)**; updated with**  [http://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/02-13-1-pneumo.pdf](http://www.immunize.org/vis/hpv_gardasil_9.pdf) | | |
| --- | --- | --- |
| **Age** | **Vaccination history: Total number of PCV7 and/or PCV13 doses received previously** | **Recommended PCV13 Regimen1,** |
| 2 months through 6 months | 0 doses | 3 doses, 8 weeks apart; fourth (booster) dose at age 12 through 15 mos |
| 1 dose | 2 doses, 8 weeks apart; fourth dose at age 12 through 15 mos |
| 2 doses | 1 dose, 8 weeks after the most recent dose; fourth dose at age 12 through 15 mos |
| 7 months through 11 months | 0 doses | 2 doses, 8 weeks apart; third dose at 12 through 15 mos |
| 1 or 2 doses before age 7 mos | 1 dose at age 7 through 11 mos, with a second dose at 12 through 15 mos (≥ 8 weeks later) |
| 12 months through 23 months | 0 doses | 2 doses, ≥ 8 weeks apart with no booster dose of PCV13 |
| 1 dose before age 12 mos | 2 doses, ≥ 8 weeks apart |
| 1 dose at ≥12 mos | 1 dose, ≥ 8 weeks after the most recent dose **2** |
| 2 or 3 doses before age 12 mos | 1 dose, ≥ 8 weeks after the most recent dose **2** |
| 4 doses of PCV7 or other age-appropriate, complete PCV7 schedule | 1 supplemental dose, ≥ 8 weeks after the most recent dose \* |
| Healthy children 24 months through 59 months | Any incomplete schedule | 1 dose, ≥ 8 weeks after the most recent dose 2 |
| 4 doses of PCV7 or other age-appropriate, complete PCV7 schedule | 1 supplemental dose, ≥ 8 weeks after the most recent dose of PCV7 vaccine\* |

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| **TABLE 2. Recommended schedules for administering doses of PCV13 among children who have not previously received PCV7 or PCV13 and those incompletely vaccinated with PCV7 or PCV13 for age and supplemental PCV13 immunization**  [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5911a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm)**; updated with**  [http://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/02-13-1-pneumo.pdf](http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf) | | |
| **Age** | **Vaccination history: total number of PCV7 and/or PCV13 doses received previously** | **Recommended PCV13 Regimen1** |
| Children 24  months through 71 months with underlying medical conditions as defined in  Table 1 **3** | Any incomplete schedule of <2 doses | 2 doses, one ≥ 8 weeks after the most recent dose and another dose ≥ 8 weeks later |
| Any incomplete schedule of 3 doses | 1 dose, ≥ 8 weeks after the most recent dose |
| 4 doses of PCV7 or other  age-appropriate complete PCV7 schedule | 1 supplemental dose, ≥ 8 weeks after the most recent dose\* |
| Children 6 years through 18 years who are at increased risk for invasive pneumococcal disease as defined in footnote 4 | Not previously vaccinated with PCV13 | 1 dose |
| **Footnotes:**  **1** Minimum interval between doses is 8 weeks except for children vaccinated at age <12 months, for whom the minimum interval between doses is 4 weeks. Minimum age for administration of the first dose is 6 weeks.  **2** No additional PCV13 doses are indicated for children 12 through 23 months of age who have received  2 or 3 doses of PCV7 before age 12 months and at least 1 dose of PCV13 at age 12 months or older.  **3** For children with underlying medical conditions (See Table 4), PCV13 is indicated through 71 months of age.  **4**  Includes children with anatomic or functional asplenia, including sickle cell disease, HIV infection or other immunocompromising condition, cochlear implant or cerebrospinal fluid leak.  \* A single supplemental dose of PCV13 is given at least 8 weeks after the last dose of PCV7 is recommended for all children 14 through 59 months of age who have received 4 doses of PCV7 or other age-appropriate, complete PCV7 schedule (fully vaccinated with PCV7). For children who have underlying medical conditions, a supplemental dose is recommended through 71 months of age. | | |

**BOX 1. Recommended intervals for sequential use of PCV13 and PPSV23 for immunocompetent adults aged ≥65 years — Advisory Committee on Immunization Practices, United States**



**Abbreviations:** PCV13 = 13-valent pneumococcal conjugate vaccine;   
PPSV23 = 23-valent pneumococcal polysaccharide vaccine.

| **TABLE 3. Summary of recommended intervals, by risk and age groups, for persons with indications to receive PCV13 and PPSV23 sequence — Advisory Committee on Immunization Practices, United States, September 2015** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Risk group/Underlying medical condition** | **Intervals for PCV13–PPSV23  sequence, by age group** | | | | **Intervals for PPSV23–PCV13  sequence, by age group** | | | |
| **24–71 months** | **6–18 years** | **19–64 years** | **≥65 years** | **24–71 months** | **6–18 years** | **19–64 years** | **≥65 years** |
| **No underlying chronic conditions** | **NA** | **NA** | **NA** | **≥1 year** | **NA** | **NA** | **NA** | **≥1 year** |
| **Immunocompetent persons**  Chronic heart disease  Chronic lung disease  Diabetes mellitus  Alcoholism\*  Chronic liver disease, cirrhosis\*  Cigarette smoking\* | ≥8 weeks | NA | NA | ≥1 year | ≥8 weeks | NA | NA | ≥1 year |
| **Immunocompetent persons**  Cerebrospinal fluid leak  Cochlear implant | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥1 year | ≥1 year |
| **Persons with functional or anatomic asplenia**  Sickle cell disease/other hemoglobinopathy  Congenital or acquired asplenia | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥1 year | ≥1 year |
| **Immunocompromised persons**  Congenital or acquired immunodeficiency  Human immunodeficiency virus infection  Chronic renal failure  Nephrotic syndrome  Leukemia  Lymphoma  Hodgkin disease  Generalized malignancy  Iatrogenic immunosuppression  Solid organ transplant  Multiple myeloma\* | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥8 weeks | ≥1 year | ≥1 year |
| **Abbreviation:** NA = not applicable, sequential use of PCV13 and PPSV23 is not recommended for these age and risk groups.  \* Underlying medical conditions that are not included in the recommendations for children aged <6 years. | | | | | | | | |

| **TABLE 4. Underlying medical conditions that are indications for pneumococcal vaccination among children, by risk group --- ACIP, United States** [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5911a1.htm](https://www.cdc.gov/hepatitis/hbv/index.htm)[http://www.cdc.gov/vaccines/programs/vfc/downloads/resolutions/02-13-1-pneumo.pdf](http://jamanetwork.com) | |
| --- | --- |
| **Risk group** | **Condition** |
| Immunocompetent persons | Chronic heart disease\*  Chronic lung disease†  Diabetes mellitus  Cerebrospinal fluid leaks  Cochlear implant |
| Functional or anatomic asplenia | Sickle cell disease and other hemoglobinopathies  Congenital or acquired asplenia, or splenic dysfunction |
| Immunocompromised persons | HIV infection  Chronic renal failure and nephrotic syndrome  Diseases associated with immunosuppressive chemotherapy or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; or solid organ transplantation  Congenital immunodeficiency§ |
| \* Particularly cyanotic congenital heart disease and cardiac failure.  † Including asthma if treated with high-dose oral corticosteroid therapy.  § Includes B- (humoral) or T-lymphocyte deficiency; complement deficiencies, particularly C1, C2, C3, and   C4 deficiency; and phagocytic disorders (excluding chronic granulomatous disease). | |

| **Table 5**. **Medical conditions or other indications for administration of 13-valent pneumococcal conjugate vaccine (PCV13), as well as indications for 23-valent pneumococcal polysaccharide vaccine (PPSV23) administration and revaccination for children aged 6-18 years, and adults aged 19 through 64 years.\*** <http://www.cdc.gov/mmwr/pdf/wk/mm6225.pdf> | | | | |
| --- | --- | --- | --- | --- |
| **Risk Group** | **Underlying Medical Condition** | **PCV13** | **PPSV23** | |
| **Recommended** | **Recommended** | **Revaccination 5 years after first dose** |
| Immunocompetent persons | Chronic heart disease **†** |  | X |  |
| Chronic lung disease § |  | X |  |
| Diabetes mellitus |  | X |  |
| CSF leaks | X | X |  |
| Cochlear implants | X | X |  |
| Alcoholism |  | X |  |
| Chronic liver disease, cirrhosis |  | X |  |
| Cigarette smoking |  | X |  |
| Persons with functional or anatomic asplenia | Sickle cell disease/other hemoglobinopathies | X | X | X | |
| Congenital or acquired asplenia | X | X | X | |
| Immunocompromised persons | Congenital or acquired immunodeficiencies ¶ | X | X | X | |
| HIV infection | X | X | X | |
| Chronic renal failure | X | X | X | |
| Nephrotic syndrome | X | X | X | |
| Leukemia | X | X | X | |
| Lymphoma | X | X | X | |
| Hodgkin disease | X | X | X | |
| Generalized malignancy | X | X | X | |
| Iatrogenic immunosuppression **\*\*** | X | X | X | |
| Solid organ transplant | X | X | X | |
| Multiple myeloma | X | X | X | |
| **\*** Both PCV13 and PPSV23 should be administered routinely in series to all adults aged 65 years and older, regardless of previous history of vaccination with pneumococcal vaccine before age 65 years (See pages 1 and 2).  **†** Including congestive heart failure and cardiomyopathies, excluding hypertension.  **§** Including chronic obstructive pulmonary disease, emphysema, and asthma.  **¶** Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease).  **\*\*** Diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy. | | | | | |

**Dosage and Route**

Give PCV13 vaccine 0.5 mL intramuscularly (IM) according to the recommended schedule. **Always check the package insert prior to administration of any vaccine**.

**Anatomical Site**

Administer IM vaccines at a 90o angle with a 22- to 25-gauge needle.

* For infants < 12 months of age, administer into the anterolateral aspect of the thigh with a 7/8- to 1-inch needle. (For newborn and or low birth weight infants only, a 5/8” needle may be considered.)
* For children > 12 months of age, administer into the anterolateral aspect of the thigh or deltoid muscle, using a 7/8- to 1¼-inch needle.
* For adults, aged 19 years and older, administer in the deltoid muscle. Consult “Epidemiology and Prevention of Vaccine Preventable Diseases” (The Pink Book), Appendix D, for information about appropriate needle sizes and lengths for administering vaccines. As with other intramuscular injections, use with caution in patients on anticoagulant therapy.

**Use with Other Vaccines:**

Immunize.org Ask the Experts column, <http://www.immunize.org/askexperts/experts_pneumococcal_vaccines.asp#pcv13_adults>

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| **The pneumococcal conjugate vaccine (PCV13) package insert says that in adults, antibody responses to PREVNAR 13 (Pfizer) were diminished when given with inactivated influenza vaccine.   Does this mean we should not give PCV13 and influenza vaccine at the same visit?** |
|  |
| No. The available data have been interpreted that any changes in antibody response to either vaccines' components were clinically insignificant.   If PCV13 and influenza vaccine are both indicated and recommended, they should be administered at the same visit.   See the PCV13 ACIP recommendations,  [www.cdc.gov/mmwr/pdf/wk/mm6337.pdf, page 824](http://www.cdc.gov/mmwr/pdf/wk/mm6337.pdf,%20page%20824). |

ACIP Recommendations, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6337a4.htm>

**Coadministration with Other Vaccines**

Concomitant administration of PCV13 and trivalent inactivated influenza vaccine (TIV) has been demonstrated to be immunogenic and safe. PCV13 can be coadministered with TIV in an adult immunization program. However, a randomized double-blind trial found slightly lower pneumococcal serotype–specific geometric mean concentrations and lower proportion achieving at least a fourfold rise in hemagglutination inhibition assay titer for one of three influenza subtypes (influenza A[H3N2]) with PCV13 plus TIV compared with PCV13 alone or TIV alone among adults aged ≥65 years (16). Currently, no data are available on coadministration with other vaccines (e.g., tetanus, diphtheria, and acellular pertussis vaccine or zoster vaccine) among adults.

See the PCV13 package insert, [http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM201669.pdf](http://www.immunize.org/catg.d/p3085.pdf)

DRUG INTERACTIONS -----------------------------

In adults, antibody responses to PREVNAR 13 were diminished when given with inactivated trivalent influenza vaccine (TIV).

There is no true waiting period between inactivated influenza vaccine and PCV13 vaccine, as both are inactivated vaccines.  However, if not given at the same visit, separating the doses by at least five to seven days would enable any perceived and immediate adverse events to be possibly identified as caused by only one of the vaccines given.

**Precautions (See package insert for a complete listing of precautions):**

* Apnea following intramuscular vaccination has been observed in some infants born prematurely. Decisions about when to administer an intramuscular vaccine, including PCV13, to infants born prematurely should be based on consideration of the individual infant’s medical status, and the potential benefits and possible risks of vaccination.
* For intramuscular use only. DO NOT inject intravenously, intradermally, or subcutaneously.
* The preferred sites for injection are the anterolateral aspect of the thigh in infants or the deltoid muscle of the upper arm in toddlers, young children, adolescents, and adults. PCV13 vaccine should not be injected in the gluteal area or areas where there may be a major nerve trunk and/or blood vessel.
* Since this product is a suspension containing an adjuvant, shake vigorously immediately prior to use to obtain a homogenous, white suspension in the vaccine container.

**Contraindications**

* Severe allergic reaction (e.g., anaphylaxis) to any component of PCV13, PCV7, or any diphtheria toxoid-containing vaccine.

**Adverse Events**

* See the product’s package insert
* See Adverse Events Following Vaccinations page of this section

**Storage and Handling**

* Store in refrigerator at 36oF to 46oF (2oC to 8oC)
* DO NOT FREEZE. Discard if PCV13 has been frozen.

**Other Important Notes**

* The tip cap and rubber plunger of the prefilled syringe are not made with natural latex rubber.
* PCV13 does not contain thimerosal.
* PCV13 will not protect against disease caused by *Streptococcus pneumoniae* serotypes that are not in the vaccine.

**References:**

MMWR September 4, 2015 / 64(34);944-947: Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6434a4.htm?s\_cid=mm6434a4\_w](https://www.gsksource.com/pharma/content/dam/GlaxoSmithKline/US/en/Prescribing_Information/Pediarix/pdf/PEDIARIX.PDF?s_cid=mm6434a4_w)

MMWR September 19, 2014 / 63(37);822-825: Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Adults Aged ≥65 Years: Recommendations of the Advisory Committee on Immunization Practices (ACIP). [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6337a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6301a1.htm)

MMWR June 28, 2013 / 62(25);521-524: Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Children Aged 6–18 Years with Immunocompromising Conditions: Recommendations of the Advisory Committee on Immunization Practices (ACIP). [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6225a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6301a1.htm)

Recommended Immunization Schedule for Persons Aged 0 Through 18 Years, United States, 2015: [http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html](http://vaers.hhs.gov/helpinstructions)

PCV13 Vaccine Package Insert (revised 05/2015)   
[http://labeling.pfizer.com/showlabeling.aspx?id=501](http://vaers.hhs.gov/resources/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf?id=501).

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