

## 3.8 IMMUNIZATIONS

**Immunizations:** Attach immunization record or fill in the table on page 2. Record ALL valid doses for which you have documentation.  
 Varicella Titer:  Neg  Pos      Immune by:  Exam  History

### PURPOSE

To ensure that every child and adult refugee is appropriately immunized against vaccine-preventable diseases.

### BACKGROUND

Outbreaks of vaccine-preventable diseases occur overseas as well as in the United States. Highlighting this risk, the CDC has documented outbreaks of vaccine-preventable diseases. An estimated 20 million cases of measles occur each year worldwide, and cases continue to be imported into the United States. Imported measles cases can result in large outbreaks, particularly if introduced into areas with pockets of unvaccinated persons.<sup>1,2,3</sup>

In 2005 mumps cases in Indiana<sup>4</sup> as well as widespread mumps outbreak in the Midwest.<sup>5</sup> Globally, high infant and child mortality from vaccine preventable diseases has led to major childhood immunization efforts.

While vaccination programs are incorporated into refugee health services, most refugee children and adults come to the United States with high risk of under-immunization. United States-bound refugees may receive additional vaccinations pre-departure; the schedules as of September 2012 are available [on-line](#).

Recommendations for child and adult immunizations change. Integration of newer vaccines combined with changes in guidelines for older vaccines may present challenges for clinical logistics. The extra burden of these vaccination changes for both patient and clinic staff are notable; however, clinics must overcome such challenges to ensure that refugee patients are on the path to being fully immunized according to the vaccine schedules of the CDC's Advisory Committee on

<sup>1</sup> Centers for Disease Control and Prevention. Measles – United States, January 1-August 24, 2013. *MMWR*. 2013;62:741-743.

<sup>2</sup> Centers for Disease Control and Prevention. Measles Outbreak Among Members of a Religious Community – Brooklyn, New York March-June 2013. *MMWR*. 2013;62:752.

<sup>3</sup> Centers for Disease Control and Prevention. Measles Outbreak Associated with a Traveler Returning from India – North Carolina April-May 2013. *MMWR*. 2013;62:753

<sup>4</sup> Centers for Disease Control. Import-associated measles outbreak -- Indiana, May--June 2005. *MMWR*. 2005;54:1073-1075.

<sup>5</sup> Centers for Disease Control. Update: multistate outbreak of mumps -- United States, January 1--May 2, 2006. *MMWR*. 2006;55:559-563.

Immunization Practices (ACIP) and the MDPH Immunization Program.

*RHAP always requires clinicians to follow the latest ACIP routine and catch-up schedules for both children and adults which can be found on the [CDC website](#). In addition, [detailed guidance from the ACIP about each vaccine](#) can be found on their website. Massachusetts school entry vaccine requirements are on the [MDPH Immunization Program website](#).*

All individuals applying to adjust their immigration status to Permanent Resident Alien are required to document vaccination in accordance with ACIP recommendations; vaccinations are recorded on the [USCIS Form I-693](#) by a Civil Surgeon. The RHAP provider plays an essential role in assuring that refugees meet the vaccine requirements.

The recommendations in this manual are current as of October 2013. For updates, please see the [MDPH Immunization Program](#) or [CDC](#) websites.

**Note: All Refugee Health Assessment Program sites must be enrolled and participate in the Vaccines for Children Program/MDPH Immunization Program.**

## PROGRAM REQUIREMENTS

In brief, the RHAP requires the following of providers:

1. Evaluate immunization history, review overseas documentation including pre-departure documents and record valid doses on the RHAP form and/or the electronic health record.
2. Initiate all necessary age-appropriate vaccines per ACIP adult and childhood vaccine schedules. Provide each refugee with a childhood or adult vaccination booklet, or equivalent document, with completed documentation of past and RHAP vaccination; update at the second visit.
3. Order serum IgG levels against Varicella (chicken pox) for all refugees aged  $\geq 5$  years of age.
  - ⇒ Vaccinate susceptible individuals. Clinicians may consider administering a single dose of vaccine pending the serology results to facilitate school entry.
  - ⇒ Blood should be drawn prior to immunization whenever possible (for Varicella and Hepatitis B serologies).

4. Document immunity to varicella, based on exam, history or serologic testing.
5. Educate refugees of the need to bring the immunization documentation to all medical visits including the Civil Surgeon evaluation required for change of status applications.

**All RHAP clinicians must follow all adult and childhood vaccine schedules and guidelines from the MDPH Immunization Program and ACIP.**

Because the basic RHAP process is two visits separated by approximately one month, it is not expected that RHAP providers will be able to administer complete vaccine series for refugees who need them. At a minimum, RHAP providers should initiate/continue appropriate vaccination at each RHAP visit, refer to primary care, and educate the refugee about school and USCIS requirements and follow-up timing to complete vaccine series. RHAP providers also have the option of scheduling pre-RHAP (for children) and post-RHAP (for adults) vaccine-only nursing visits to facilitate school entry for children or complete a primary vaccine series for adult refugees. RHAP reimburses these visits and the cost of vaccines procured by the site for immunizing adult refugees.

Evaluation of immunization history through record review should determine any need for vaccination to achieve age-appropriate vaccination levels. The ACIP has clear guidelines on evaluation of immunization status for individuals vaccinated outside the United States.<sup>6</sup> These are summarized below.

### ***Evaluating Findings***

The role of a provider during the health assessment is, first, to assess the immunization status of the patient (including serologic testing as described above); second, to proceed to vaccinate according to age in order to initiate or complete the required primary vaccine series'; and third, to make recommendations to primary care for necessary follow-up in order to complete recommended vaccination. All refugees, especially parents of school-age children, should be educated about the importance of completing primary vaccine series' and immunization requirements for school entry, daycare attendance, and future immigration status changes.

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<sup>6</sup> Centers for Disease Control and Prevention. General recommendations on immunization recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*. 2011;60(No. RR-2):27-29 .

With the exception of chicken pox, verbal or written report of a history of a disease is not considered adequate proof of immunity. Similarly, incomplete documentation of overseas vaccines may not be considered adequate for withholding vaccination. For example, a document with only a year for the vaccination date is not acceptable. Clinicians should not write phrases such as “received in home country,” “up to date,” or “in time” on the RHAP form or a personal vaccine document. These assertions will not be useful for school nurses or Civil Surgeon personnel guided by strict regulations. Instead, clinicians must inform refugees of the need for vaccines to assure immunity to vaccine-preventable disease and proceed with necessary immunizations per ACIP guidelines.

### **Acceptability of Vaccinations Received Outside the US**

The acceptability of vaccines received in other countries to meet vaccination requirements in the United States depends on three factors: Vaccine potency, adequate documentation, and vaccination in accordance with the US immunization schedule. For complete guidance, see pages 27-29 and 49 in [ACIP's section on Persons Vaccinated Outside the United States](#) in their *General Recommendations on Immunization*.

#### **1. Vaccine Potency**

- ◆ The majority of vaccines used worldwide are from reliable local or international manufacturers, and no potency problems have been detected, with the occasional exception of tetanus toxoid and OPV vaccines.

#### **2. Adequate Documentation of Receipt of Vaccine**

- ◆ Doses of vaccine with written documentation of the date of receipt should be accepted as valid. At a minimum, month and year must be a part of the date. Camp vaccination cards or Department of State forms are acceptable records. Self-reported doses of vaccine without written documentation should not be accepted, and patients should be considered susceptible. CDC notes that under mass vaccination campaigns conducted overseas for outbreak control, documentation may not be provided and therefore may not be recorded on the Department of State forms.
- ◆ Language translations for vaccine names are available at [Immunization Action Coalition](#) and [CDC](#).
- ◆ All adults and children should be started on the age-appropriate catch-up immunization schedule used in the United States.

### 3. Immunization Schedule

Age at vaccination **and** spacing of vaccine doses **must be assessed for acceptability**. To be considered valid, the doses must meet the minimum age and intervals in the [U.S. immunization schedules posted on the CDC website](#). The minimum intervals of different vaccine antigens can be found in [Table 1 of the ACIP's General Recommendations on Immunization](#).

#### DTP/DTaP:

- ✓ **Age:** Any dose of DTP/DTaP vaccine administered at  $\geq 6$  weeks of age can be considered valid.
- ✓ **Spacing:** The first 3 doses of DTP/DTaP vaccine should have been separated by a minimum of 4 weeks.
- ✓ The 4<sup>th</sup> dose should have been administered no less than 6 months after the third dose.
- ✓ The 5<sup>th</sup> dose should have been administered no less than 6 months after the 4<sup>th</sup> dose and at 4 years of age or older.
- ✓ A 5<sup>th</sup> dose is not needed if the 4<sup>th</sup> dose was administered after 4 years of age or older.

#### HIB:

- ✓ **Age:** Any dose of Hib vaccine administered at  $\geq 6$  weeks of age can be considered valid.
- ✓ **Spacing:** Doses of Hib vaccine in the primary series should have been administered no less than 1 month apart.
- ✓ The booster dose of Hib vaccine should be administered at least 2 months after the previous dose, and should not be administered before age 15 months.

#### POLIO:

- ✓ **Age:** Doses of OPV and IPV administered at  $\geq 6$  weeks of age can be considered valid.  
*This section refers to evaluation of overseas vaccination only. Current ACIP guidelines stipulate that in most circumstances, only IPV should be used in the United States. See below for further information.*

**Spacing:** The timing of vaccine doses varies depending on the schedule used:

When interpreting records from overseas, please note bivalent OPV does not count as a valid dose towards meeting the recommendations/requirements for the

U.S. schedule. Only trivalent doses of OPV or IPV should be counted.

*Sequential IPV/OPV:*

At least 4 weeks are needed between doses 1, 2, and 3, although an interval of 6-8 weeks is preferred. At least 4 weeks are needed between doses 3 and 4, although an interval of 6 months is preferred. When IPV and OPV are used in combination, 4 doses are always needed to complete the primary series.

*All OPV:*

At least 4 weeks are needed between doses 1, 2, 3, and 4; however, >6 months is preferred between the final doses in the series. For children who received all OPV, the third dose of OPV could be administered as early as 6 months of age. A minimum of 3 doses is needed to complete the primary series, if the final dose was administered at age  $\geq 4$  years.

*All IPV:*

At least 4 weeks are needed between doses 1 and 2, and > 6 months between doses 3 and 4. The final dose in the IPV series should be administered at age >4 years regardless of the number of previous doses. A 4th dose IPV is not necessary if the 3rd dose was administered at 4 years of age or older and >6 months after the previous dose

Any dose of polio vaccine administered at the above-recommended minimum intervals can be considered valid. Persons vaccinated outside the United States may need one or more additional doses of IPV to meet current immunization guidelines in the United States.

**NOTE:** *Current ACIP guidelines call for the use of all-IPV vaccine schedule in the United States. While most refugees will have received OPV overseas, RHAP clinicians should only use IPV except in specific circumstances described in the ACIP guidelines. See [ACIP recommendations for polio vaccine](#).*

**MEASLES:**

- ✓ **Age:** Any dose of measles vaccine administered at  $\geq 12$  months of age can be interpreted as valid. Children vaccinated against measles before their first birthday should be revaccinated if they are now  $\geq 12$  months of age. The 2<sup>nd</sup> dose may be given at age 4-6 years, prior to school entry, provided  $\geq 4$  weeks have elapsed

since the prior dose.

- ✓ **Spacing:** Persons born in or after 1957 should have documentation of having received two doses of live measles vaccine and live mumps vaccine (preferably combination measles, mumps and rubella) on or after their first birthday or other evidence of immunity. The 2 doses of vaccine should be at least 4 weeks apart. When interpreting overseas vaccine documentation, clinicians must note whether the patient received measles vaccine only or the trivalent MMR.

A written or verbal report of a history of measles (as well as mumps and rubella) disease is not considered adequate documentation of immunity. While serologic confirmation is acceptable, RHAP should administer MMR to any refugee in need of immunization with any of the three disease components. **Most refugees will need a dose of MMR for coverage against rubella and/or mumps. Thus MMR may need to be given even if a refugee has documentation of previous measles vaccination.**

***NOTE:** Administration of measles vaccine (M) or measles/rubella vaccine (MR) may be documented on overseas records. These records should be carefully reviewed and doses appropriately documented to assure appropriate follow-up.*

#### **HEPATITIS B:**

HBV vaccine is now being used in much of the world. Schedules may vary slightly from ACIP guidelines. In general, the minimum interval between dose 1 and dose 2 is 4 weeks and between dose 2 and 3 is 8 weeks. The final (third or fourth) dose in the HBV vaccine series should be administered no earlier than age 24 weeks and at least 16 weeks after the first dose. When using combination vaccines that include HBV, four doses are recommended. **Lastly, individuals who have received one or two doses of vaccine overseas and then have a positive Anti-HBs serology test during RHAP still should finish the remaining doses of the HBV vaccine series.**

#### **VACCINES FOR CHILDREN**

RHAP clinicians should follow all routine or catch-up recommendations of the ACIP/MDPH Immunization Program.

These recommendations include immunization against hepatitis B, polio, diphtheria, tetanus, pertussis, *H. influenzae* type B, measles, mumps, rubella, pneumococcus, and varicella as well as the newer recommendations for human papillomavirus, rotavirus, hepatitis A, meningococcus, and influenza.

**Review current ACIP/MDPH Immunization Program recommendations [for routine and catch-up vaccination of children and adults](#) and [requirements for school attendance](#).**

**A note on repeating immunizations:**

Some clinicians may be concerned that it is unnecessary to re-immunize children (or adults) who do not have documentation of prior vaccination. ACIP recommendations state that while various approaches are valid, repeating vaccinations is an acceptable option that is safe and prevents the need to obtain and interpret serologic tests. If avoiding unnecessary injections is desired, judicious use of serologic testing might help determine which vaccinations are needed; however, since for some vaccines, the most readily available serologic tests cannot document protection against infection, it is RHAP policy that serologic testing be limited to determining immunity to Hepatitis B and Varicella. Most refugees will be under-immunized for most vaccines and lack documentation for those they did receive. Given school and USCIS requirements, clinicians should promptly vaccinate refugee children with all needed age-appropriate vaccines.

For ascertaining the need for varicella immunization, RHAP protocols include a mixed screening strategy to ensure immunity in all refugees. Such a screening strategy has been shown to be cost-effective for varicella.<sup>7</sup> Clinicians should assess for a reliable history of chicken pox disease. If the patient has had chicken pox, the clinician should document the positive history on the RHAP form. In addition, if the clinician notes signs of chicken pox scars on physical examination, s/he should document this on the form. In these cases, no immunization is needed. Additionally, refugees 5 years of age and older will be screened for anti-varicella IgG antibody levels

<sup>7</sup> Figueira M, Barnett ED, Christiansen D, McNamara ER. Cost-benefit of serotesting compared with universal immunization for varicella in refugee children from six geographic regions. *J Travel Med.* 2003;10:203-207.

at the first visit. This age was determined based on seroprevalence studies as noted above and RHAP administrative requirements. Those with serologic evidence of immunity do not need immunization while those without immunity should receive the vaccine and be instructed on follow-up timing if a second dose is needed. Clinicians may also opt to give a single dose of vaccine to school-aged children pending the serology result to facilitate school entry. Children under age 5 years without a positive history or physical exam should receive the vaccine without serologic testing. The revised RHAP form contains space for documentation of the results of varicella serology.

For measles, all refugees should receive MMR vaccine according to ACIP/MDPH Immunization Program schedules. **Refugees born in or after 1957, who are age 12 months or older and without contraindications, should be given the first dose of MMR vaccine at the first visit.** This dose will also cover for immunity to rubella. For children (and adults who meet ACIP criteria), a second dose of MMR at least 4 weeks after the first dose is recommended to ensure measles and mumps immunity.

- ✓ Remember, children vaccinated against measles before their first birthday should be revaccinated if they are now  $\geq 12$  months of age. The 2<sup>nd</sup> dose may be given at age 4-6 years, prior to school entry, provided  $\geq 4$  weeks have elapsed.

### ***Child Vaccine Updates***

Recent updates in child and adolescent vaccines are summarized as follows:

- Rotavirus vaccine is recommended in either a 2-dose schedule at ages 2 and 4 months (Rotarix) or 3-dose schedule at ages 2, 4, and 6 months (RotaTeq). The first dose should be administered at ages 6 weeks through 12 weeks with subsequent doses administered at 4--10 week intervals. Rotavirus vaccination should not be initiated for infants aged 14 weeks 6 days and the maximum age for the final dose is 8 months 0 days
- The human papillomavirus (HPV) vaccine is recommended in a 3-dose schedule with the second and third doses administered 1-2 and 6 months after the first dose. Routine vaccination with HPV is recommended for all adolescents aged 11-12 years; the vaccination series can be started as young as age

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9 years; and a catch-up vaccination is recommended for females aged 13-18 years who have not been vaccinated previously or who have not completed the full vaccine series. Males aged 11-18 may also be immunized regardless of individual risk. Either HPV4 (Gardasil) or HPV2 (Cervarix) can be used for females; only HPV4 is approved for males.

- Hepatitis A vaccine consists of a 2-dose schedule with the 2<sup>nd</sup> dose administered 6-18 months apart. It is recommended for all children 12-23 months of age, but it may be completed after 23 months of age if necessary. **NOTE: In recognition of research that has shown high levels of naturally-acquired immunity to hepatitis A virus, until it becomes a school entry requirement, RHAP will NOT require clinicians to administer hepatitis A vaccine during the health assessment.**
- Meningococcal vaccination is routinely recommended. The MCV4 vaccine should be given to children 11-12 years of age with a booster dose at 16 years of age. In addition, unvaccinated adolescents at any age should receive one or two doses as appropriate. Certain high risk individuals should also receive a 1 or 2 dose primary series of MCV4 (e.g., asplenia, persistent complement component deficiencies, HIV infection, military, travel, etc). Boosters may be indicated if they remain at risk and should be given at >3 year intervals for children aged 2 through 6 years and at > 5 year intervals for persons aged 7 years and older. See the [ACIP recommendations on meningococcal vaccines](#) for more detailed information.
- Tdap. Tdap is routinely recommended for all adolescents at 11-12 years and can be administered, regardless of the interval since the last tetanus- or diphtheria- containing dose (no minimum interval). Children aged 7-10 years who are not fully immunized with the DTaP vaccine (<5 doses or < 4 doses if the 4th dose was given on or after the 4th birthday) should be given Tdap vaccine as the first dose in the catch-up series. Adolescents 11-18 years of age who have not received a Tdap should be given one at their 1<sup>st</sup> visit. In addition, a single dose of Tdap should be given to all adolescents who will be close contacts with infants to help prevent transmission of pertussis.

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- Pneumococcal Vaccines.
  - PCV13: This vaccine series is recommended routinely for healthy children through 59 months of age. It is recommended for PCV13 naïve children with chronic medical conditions through 71 months of age (e.g., chronic heart disease, chronic lung disease [including asthma if treated with high dose steroids], diabetes, immunocompromising conditions, asplenia (including sickle cell), cochlear implants; and cerebrospinal fluid (CSF) leaks, etc.). In addition, a single dose of PCV13 is recommended for children 6 through 18 years of age who have never been vaccinated with: functional or anatomic asplenia; HIV infection or other immunocompromising conditions; cochlear implants; and CSF leaks.
  - PPSV23: 1 dose is also recommended for children ≥2 years of age with certain chronic medical conditions including, asplenia, immunocompromising conditions, cochlear implants and CSF fluid leaks. One-time revaccination >5 years after the 1<sup>st</sup> dose is indicated for those with: functional or anatomic asplenia (including sickle); HIV infection or other immunocompromising conditions; chronic renal failure or nephrotic syndrome.

See the ACIP immunization schedules for [guidance on risk groups, revaccination and intervals between doses of PPSV23 and PCV13](#).

See also the [ACIP recommendations for pneumococcal vaccines](#) for more detailed information.

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All adults lacking a completed primary series of diphtheria and tetanus toxoid should be vaccinated with three doses of Td. The first dose of the series should be Tdap vaccine.

- ✓ The first two doses of a primary series should be administered during health assessment visits, after which the refugee should receive subsequent doses by a primary care provider or at a third visit with the RHAP clinic.
- ✓ There is no need to repeat doses if the schedule for the primary series or booster doses is delayed.
- ✓ A single dose of Tdap should be administered to all adults who have not previously received one, regardless of the time since the last tetanus- or diphtheria- containing dose (no minimum interval).
- ✓ Tdap should replace Td for a single dose in the primary series for unvaccinated or partially vaccinated adults or for a booster dose if they have completed the series.
- ✓ **Special note for pregnant women:** Tdap should be administered during **each** pregnancy, regardless of the time since last dose of Td or Tdap (no minimum interval) To maximize antibody transfer to the infant, administer Tdap between 27 and 36 weeks gestation, although Tdap may be given any time during pregnancy.

To help prevent the transmission of pertussis to infants, all adolescent and adults who are close contacts should receive a single dose of Tdap. Children < 7 years age should be up-to-date on their DTaP series. This is referred to as the “cocooning effect” to protect infants until their own immunity develops.

- ✓ **All RHAP clinical staff should receive a booster dose of Tdap regardless of interval since the last Td dose.**

**For adults who have not received the primary series of at least 3 doses of DTP or TD/Td/Tdap, vaccinate as follows:**

<i>Dose</i>	<i>Age/Interval</i>	<i>Product</i>
Primary 1	---	Tdap
Primary 2	4 - 8 weeks after #1 dose	Td
Primary 3	6 - 12 months after #2 dose	Td
Booster	Every 10 years since last dose	Single dose of Tdap if not received, and then Td

**POLIO:**

- ✓ Routine vaccination is not recommended for persons over age 18 years who reside in the United States except for individuals at high risk of exposure to wild-type polio virus and unimmunized adults at risk of exposure to OPV. Unimmunized adults who require vaccination should receive three doses of IPV per the above schedule for Td.

**MMR:**

- ✓ Adult refugees born in or after 1957 should have documentation of having received at least one dose of live measles vaccine, as MMR with mumps and rubella, on or after their first birthday, or serologic evidence of immunity. If not, proceed to vaccinate them with MMR.
- ✓ A second dose of MMR for measles and mumps coverage is recommended for adults who:
  - are recently exposed to measles/mumps cases or have been in an outbreak setting
  - were previously vaccinated with killed measles vaccine
  - were vaccinated with an unknown vaccine between 1963 and 1967
  - are students in post-secondary educational institutions
  - work in health care facilities
  - plan to travel internationally
- ✓ Because of the high potential for contact with new immigrants or international travelers by refugees, the RHAP recommendation is **two doses** of MMR for susceptible adult refugees for whom measles/mumps vaccination is indicated.
- ✓ MMR doses may be given at an interval of one month apart, with the first two doses of Td/Tdap in the above schedule.
- ✓ MMR is contraindicated during pregnancy. Routine pregnancy testing before administering live vaccines is not recommended. According to the ACIP, reasonable practices include:
  - ✓ Asking women if they are pregnant or might become pregnant in the next 4 weeks;
  - ✓ Not vaccinating women who state they are pregnant or plan to become pregnant;
  - ✓ Explaining the theoretical risk to the fetus if MMR or varicella vaccine is administered to a pregnant woman; and
  - ✓ Counseling women who are vaccinated not to become pregnant during the 4 weeks after receiving MMR or varicella vaccine.

- ✓ All RHAP clinical staff should have documented immunity to measles, mumps and rubella, or receive 1 dose if MMR if born before 1957 or 2 doses of MMR if born in or after 1957.

**HEPATITIS B VIRUS (HBV):**

- ✓ Adults should be vaccinated for HBV if they fall into a high-risk category, come from a country where hepatitis B is intermediately or highly endemic (HBsAg prevalence >2%), or are a household contact. The first dose should be given whenever possible at the first visit. The need for subsequent doses is determined after interpretation of results of Anti-HBs and HBsAg serologic tests. Individuals who received one or two doses of vaccine overseas and then have a positive Anti-HBs antibody test during RHAP should still finish the full three-dose vaccine series.

**HEPATITIS A VIRUS:**

- ✓ Vaccination of adults is based on personal risk criteria. As noted for children, most adult refugees will be immune to hepatitis A virus from naturally acquired infection.

**INFLUENZA:**

- ✓ All refugees **and RHAP clinical staff** without contraindications should have a seasonal dose of flu vaccine.

**PNEUMOCOCCUS:**

- ✓ PPV23: 1 dose of PPV23 should be administered to all adults 65 years of age or older; younger adults with chronic medical conditions including asthma; and those who smoke cigarettes. One-time revaccination >5 years after the 1<sup>st</sup> dose is indicated for adults 19 through 64 years of age with: functional or anatomic asplenia (including sickle cell); HIV infection or other immunocompromising conditions; chronic renal failure or nephrotic syndrome. No further doses are needed for those vaccinated at > 65 years
- ✓ PCV13: A single dose of PCV13 is recommended for adults who have never been vaccinated with: functional or anatomic asplenia; HIV infection or other immunocompromising conditions; cochlear implants; and CSF leaks.

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See the latest ACIP immunization schedules for [guidance on risk groups, revaccination and intervals between doses of PPSV23 and PCV13](#).

See also the [ACIP recommendations for pneumococcal vaccines](#) for more detailed information.

**VARICELLA-ZOSTER:**

- ✓ All adult refugees should be assessed for immunity to varicella by history, exam, and serologic testing as described above. Susceptible individuals require two doses of the varicella vaccine, given at least 4 weeks apart. The first dose should be initiated at the second RHAP visit.
- ✓ Varicella vaccine is contraindicated during pregnancy. When giving MMR and varicella vaccines to women of child bearing age, the patient should be advised to avoid getting pregnant for one month after vaccination.
- ✓ For all adults 60 years of age and older, zoster vaccine should be given to prevent shingles unless the patient has specific medical contraindications. Refugees in this age group may be immunized for zoster. Screening for a history of varicella or serologic testing is **not** necessary or recommended. Titers consistent with immunity to chickenpox may represent waning immunity that is not sufficient to prevent zoster. **NOTE: because of the complexities of Medicare reimbursement, RHAP recognizes that clinical sites may not be able to provide Zostavax to refugees during the RHAP.** RHAP sites can be reimbursed for zoster vaccine administered during the health assessment.
- ✓ All RHAP clinical staff should have documented immunity to varicella.

**HUMAN PAPILLOMAVIRUS:**

- ✓ Vaccination is recommended for females aged 11-26 years who have not been vaccinated previously or who have not completed the full vaccine series. Males aged 11-21 should also be immunized regardless of individual risk. Males aged 22-26 years should be immunized based on risk.

**MENINGOCOCCAL:**

- ✓ Vaccination of adults is based on personal risk criteria, including first year college students living in dormitories.

Certain high risk individuals should also receive a 1 or 2 dose primary series of MCV4 (e.g., asplenia, persistent complement component deficiencies, HIV infection military, travel, etc). Boosters may be indicated if they remain at risk and should be given at > 5 year intervals for persons aged 7 years and older.

- ✓ Use MPSV4 vaccine, if patients are 56 years of age or older.

See the latest ACIP immunization schedules for [guidance on risk groups, recommendations for primary series and need for boosters.](#)

See also the [ACIP recommendations on meningococcal vaccines](#) for more detailed information.

**MDPH will reimburse clinics for additional nurse visits and vaccine costs as part of RHAP for adults who need to complete a primary vaccine series, for example a second or third dose of Td, Hepatitis B, HPV or varicella vaccines.**

**The purpose of this policy is to facilitate completion of age-appropriate immunization of adults in a timely manner in anticipation of the refugee applying for adjustment of legal status, i.e. a “green card.” For insured refugees, clinics should seek reimbursement for visits from the patient’s insurance; therefore, clinics will generally not need to utilize this reimbursement mechanism for insured refugees who continue to receive primary care at their site. The policy, however, provides a mechanism for sites to seek reimbursement for a vaccine office visit for uninsured refugees or refugees who were seen for the RHAP but receive primary care elsewhere and do not have PCP authorization for the visit. These visits must occur within one year of the refugee’s date of entry in the United States.**

**Further information on this policy is available from the RHAP Coordinator at 617-983-6564.**

### ***Pregnant Women***

MMR, varicella, zoster and LAIV are the only routine, live viral vaccines given in the U.S. those are contraindicated during pregnancy. All other routine vaccines (and TB skin testing) may be given to pregnant women who are at risk of exposure.

There is no apparent risk of adverse effects to developing fetuses when hepatitis B vaccine is administered to pregnant women. The vaccine contains non-infectious HBsAg particles and should cause no risk to the fetus. Therefore, the vaccine series can be administered to women who are at risk and who test negative for hepatitis B virus infection.

- ✓ Refugee women of reproductive age should be questioned about being pregnant or having intentions of getting pregnant before administering MMR or varicella vaccine and counseled as noted above. Although a theoretical risk of congenital rubella syndrome exists for fetuses of pregnant women vaccinated with MMR, no harm to a fetus has been documented in women inadvertently vaccinated during pregnancy. Routine pregnancy testing before administering live vaccines is not recommended. According to the ACIP, reasonable practices include:
  - ✓ Asking women if they are pregnant or might become pregnant in the next 4 weeks;
  - ✓ Not vaccinating women who state they are pregnant or plan to become pregnant;
  - ✓ Explaining the theoretical risk to the fetus if MMR or varicella vaccine is administered to a pregnant woman; and
  - ✓ Counseling women who are vaccinated not to become pregnant during the 4 weeks after receiving MMR or varicella vaccine.

Providers assessing pregnant women should administer influenza vaccine to all women who will be pregnant during influenza season, regardless of stage of pregnancy. Administration of influenza vaccine is considered safe at any stage of pregnancy.

Tdap should be administered during **each** pregnancy, regardless of the time since last dose of Td or Tdap (no minimum interval). To maximize antibody transfer to the infant, administer Tdap between 27 and 36 weeks gestation, although Tdap may be given any time during pregnancy. Pregnant women who have never received Td or have not completed the 3-dose primary series should be vaccinated. Tdap should replace one dose of Td, preferably between 27 weeks and 36 weeks. Women not vaccinated with Tdap during pregnancy should receive a dose immediately post partum.

To reduce the likelihood of transmitting pertussis to infants, all adolescents and adults who are close contacts of infants, and

have not already received a Tdap, should receive a single dose.

Immune globulin or a specific immune globulin is indicated for pregnant women following exposure to measles, hepatitis A or B, tetanus, chickenpox, or rabies.

Lastly, clinicians may also perform urine HCG testing at either RHAP visit.

[Full recommendations for pregnant and breastfeeding women can be found at CDC's Guidelines for Vaccinating Pregnant Women.](#)

### ***Contraindications***

History of anaphylactic or anaphylactic-like reactions to vaccine components and the presence of moderate or severe illness, with or without fever, are contraindications applicable to all vaccines. For the purposes of the RHAP, the patient's immunization series will be considered incomplete and he/she should be referred to primary care for consideration of allergen desensitization and follow-up on diagnosed illnesses.

### ***TB Testing and Vaccination***

The TB test (interferon gamma release assay [IGRA] or tuberculin skin test [TST]), varicella vaccine, and MMR vaccine may be given on the same day. If MMR or varicella vaccines have been given recently, postpone the TB test until 4-6 weeks after administration of the vaccines because such vaccination may temporarily suppress tuberculin reactivity and affect IGRA test results.

### ***U.S. Citizenship and Immigration Service Requirements for Adjustment of Status to Permanent Resident***

All refugees who apply for adjustment of status to permanent resident (legal permanent residence, or "green card") are required to have **written documentation** of vaccination or immunity for all vaccines recommended by the ACIP based on the age of the individual at the time of medical evaluation (with the exception of HPV and zoster). This documentation is verified by a Civil Surgeon, a physician appointed by the USCIS District Office to complete medical evaluations of adjustment of status applicants. Refugees are eligible to apply for permanent residence one year after arrival in the United States. The [immunization requirements](#) apply to all refugees, not just children.

The immunization guidelines require all applicants to have documentation of immunity to, or primary vaccination against, all major vaccine-preventable diseases. In addition, the

USCIS requires seasonal influenza vaccine for eligible individuals age 6 months to 18 years and  $\geq$  50 years. Single booster doses for adults are considered incomplete and may cause delay or jeopardize granting of legal permanent residence status. Varicella requirements may be met by vaccination, reliable written or oral history of varicella disease, or serologic evidence of immunity. While waivers exist for some incomplete vaccine series (such as insufficient time to complete a series, or medical contraindication), RHAP providers are strongly encouraged to support appropriate and complete vaccination of refugee patients.

## RESOURCES

### [Immunization Program](#)

Massachusetts Department of Public Health  
617-983-6800

### [CDC's Immunization Program](#)

800-CDC-INFO or 800- 232-4636

### [Recommendations of the Advisory Committee on Immunization Practices](#)

### [Vaccine Adverse Events Reporting System \(VAERS\)](#)

800-822-7967

### [Immunization Action Coalition](#)

612-647-9009

### [CDC Domestic Refugee Health Guidelines: Immunization](#)