



Back to the Basics -Immunizations 101

Kansas Immunization Program

Betty Grindol LPN

Martha Froetschner RN, BSN



Our Mission: To protect and improve the health and environment of all Kansans

Objectives

- Identify VFC eligibility categories, screening and documentation
- Identify how to properly store, handle and protect vaccines
- Discuss administration of vaccines
- Identify contraindication and precautions of vaccines
- Discuss documentation requirements

VFC Eligibility Categories

- **Medicaid-eligible:** Child who is eligible for the Medicaid program
- Child who has health insurance covered by a state Medicaid program: Title 19.
- Kansas Medicaid (KanCare) has 3 managed care plans:
 - Amerigroup
 - Sunflower
 - United

VFC Eligibility Continued

- **Uninsured:** A child who has no health insurance
- **American Indian or Alaska Native**



Our Mission: To protect and improve the health and environment of all Kansans

VFC Eligibility Continued

- **Underinsured:** health insurance does not cover vaccines or only selected vaccines (VFC eligible for non-covered vaccines only)
- **Underinsured:** Eligible to receive VFC vaccine only through a Federally Qualified Health Center (FQHC), Rural Health Clinic (RHC) or Deputized Local Health Department (LHD)

State Eligibility

CHIP-Title 21: insured through the Child Health Insurance Program managed by Medicaid. Child is State vaccine not federal VFC-eligible.

Underserved: Local Health Department only may use state vaccine to immunize KG-12th grade school-required vaccines. Child must be enrolled in free or reduced lunch program to qualify.



Our Mission: To protect and improve the health and environment of all Kansans

Eligibility Screening Process

- Check for VFC or state eligibility every time a child comes in for immunizations.
- Document the screening results in the patients permanent chart.
- Make sure that immunization staff know the eligibility status so the correct vaccine may be administered.

Provider VFC Enrollment

- VFC Re-Enrollment occurs annually.
- Timely completion of required VFC Enrollment Form and Provider Profile.
- List all licensed medical providers in facility (not nursing staff).
- Identify VFC Vaccine Manager.
- Identify Back-up VFC Vaccine Manager.
- Enrollment form is contract with VFC program.
- Must be signed and dated by Medical Director or equivalent.

Enrollment continued

- Clinic VFC Primary and back-up coordinators must complete the CDC's "You Call the Shots" modules. *"VFC Requirements"* and *"Storage and Handling"*
- Submit modules certificate of completion with 2014 VFC Enrollment contract.
- Submit clinic's Storage & Handling policies annually with VFC Enrollment contract.

Provider Profile

- Type of Facility
- Children served by age and funding sources:
 - Fully Insured
 - Medicaid (Title 19 only)
 - Uninsured (no insurance)
 - CHIP (Title 21) State insured (separate count from fully insured)
 - Underinsured (FQHC, RHC or deputized LHD only)
 - Underserved (LHD only)
- Number of children by age group
 - <1year
 - 1-6 years
 - 7-18 years

Profile continued

- **Numbers by age group:** Important in determining number of doses of vaccine needed annually for each age cohort.
- **VFC or State eligible:** VFC-eligible children only are allowed to receive VFC vaccine. State-eligible or privately insured may not receive VFC vaccines.
- **Profile data:** How was data gleaned and is it representative of single children not encounters? Encounter data multiplies each child by number of services received and inflates numbers of children.

Administration Fee

- VFC allowable vaccine administration fee is \$20.26 per injection.
- Can not deny immunization service to child due to parent's inability to pay vaccine administration fee.
- You can not charge for VFC vaccines these are provided to the provider at no charge.

Education Reminders

VFC Provider's **primary and back up coordinators** must complete the CDC's "You Call the Shots" modules.

"VFC requirements" and "Storage and Handling".

<http://www.cdc.gov/vaccines/ed/youcalltheshots.htm>

VFC Education Visits provide support to clinic staff to increase knowledge about the VFC program and how best practices improve immunization outcomes.

Un-announced Storage & Handling visits help educate about vaccine storage and handling.

STORAGE & HANDLING

Our Mission: To protect and improve the health and environment of all Kansans



VACCINE

- Inspect vaccines upon delivery to ensure that cold chain has been maintained.
- Check the packing slip against what you have just received.
- Document in log:
- Number of doses received by vaccine and fund type
- Lot number
- Expiration date
- Place short dated in front to be used first

Freezer: 5°F (15 ° C) or colder

Varivax

MMR*



Refrigerator: 35 ° - 46 ° F (2-8 ° C)

Hib

Hepatitis A

Hepatitis B

Human papillomavirus

DTaP, DT, Td, Tdap

Influenza (TIV/LAIV)

Polio (IPV)

MMR*

Meningococcal

(MCV4 & MPSV4)

Pneumococcal

(PPV & PCV)

Rotavirus

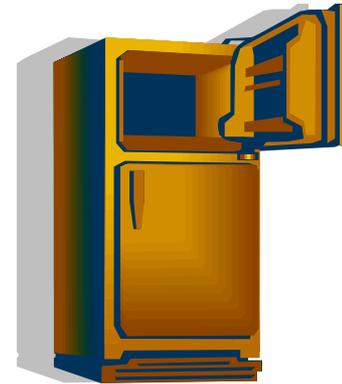


Storage Units

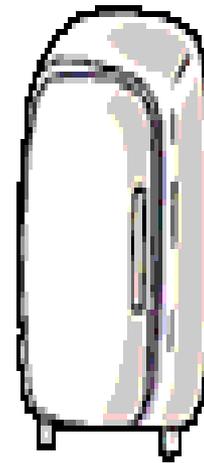
- Vaccine refrigerators may be either household-style (using refrigerator only) or vaccine-built commercial-style.
- The freezer must be separate unit.
- Must use two storage units: free-standing refrigerator and a separate, free-standing freezer.

Vaccine Storage

- DO NOT- store any food or drink in the refrigerator or freezer.
- DO - store vaccines in the middle of the refrigerator or freezer, and NOT in the door.
- DO - Rotate vaccine inventory to use the closest expiration date first



No Dorm style refrigerators



Our Mission: To protect and improve the health and environment of all Kansans

Storage & Handling Written Plans

- Primary vaccine coordinator
- Back-up vaccine coordinator
- Accepts vaccines deliveries, unpacks & stores vaccine
- Monitors & record temps twice daily
- Conducts Monthly inventory, orders vaccines, rotates stock
- Reviews & updates policies & procedures assures equipment in working order

Certified Thermometers

- CDC requires all Vaccine for Children Providers to document temperatures using:

Certified Calibrated Thermometer:

Calibrated during manufacturing

- Thermometer undergoes another certified calibration
- Certificate will indicate that the thermometer's calibration has been certified



Temperatures

- Thermometer certificate of calibration and traceability
- Thermometer placed in the middle of the middle shelf of refrigerator
- Thermometer placed in the middle of the freezer compartment
- Recorded twice daily AM & PM
- Refrigerator 35-46 F
- Freezer -58 to +5F
- If temperatures out of range take action immediately and document actions

Tips for Maintaining Temperatures

- Large bottles of water in the bottom of the refrigerator and in the doors
- Frozen packs in the freezer.
- No food in the refrigerator or freezer

Stabilizing Temperature

Frequently opening of the vaccine storage unit doors can lead to temperature variations, which could affect vaccine efficacy.

Maintain temperature stability by:

- Storing ice packs in the freezer and large jugs of water in the refrigerator along with the vaccine.

If the clinic has a power outage the vaccine storage unit will maintain proper temperature for a longer period of time if the doors are left closed and the ice packs and water jugs have been placed inside the unit.

Back-up generators are an added insurance that vaccine temperatures will be maintained.

DO NOT UNPLUG!

Post a sign that reads “DO NOT UNPLUG”

- Vaccine Storage unit
- Circuit Breaker

Routinely check that the Back-up generator is operational.

Vaccine Storage

- Post a temperature log on the door of the vaccine storage unit to record temperatures twice a day—first thing in the morning and at the end of the day
- Should have detailed WRITTEN policies for general and emergency vaccine management
- www.kdheks.gov/immunize

Vaccine Storage Continued

- Vaccine Storage and Handling Chart
- “Do Not Unplug” sign
- Policies for vaccine management and vaccine emergency plan



Vaccine Storage Continued

- Vaccine storage & emergency response plan
- Primary person
- Back-up person
- Person with 24 hour access
- Identify back up location
- Plan for transport of vaccine

Vaccine Inventory Log

A vaccine inventory log should be maintained that documents:

- _____ Vaccine name and number of doses received
- _____ Date the vaccine was received
- _____ Arrival condition of vaccine
- _____ Vaccine manufacturer and lot number
- _____ Vaccine expiration date
- _____ Doses of vaccine in each fund type

Vaccine Management

- Designate one clinic staff member and a back up person to be responsible for the storage and handling of the vaccines.
- Educate the clinic on the importance of proper storage and handling of the vaccine inventory.
- Storage and Handling checklist may be found at: www.immunize.org

Vaccine Information Statement

- The National Childhood Vaccine Injury (NCVI) Act requires that all health-care providers give parents or patients copies of Vaccine Information Statements before administering each dose of the vaccines.

Vaccine Information Statements

- Information sheets are produced by the Centers for Disease Control and Prevention (CDC)
- Explain to vaccine recipients, their parents, or their legal representatives both the benefits and risks of a vaccine.
- The National Childhood Vaccine Injury (NCVI) Act requires that VISs be handed out whenever (before each dose) certain vaccinations are given.

VACCINE INFORMATION STATEMENT	
<p>DTaP Vaccine <i>What You Need to Know</i></p> <p>1 Why get vaccinated?</p> <p>Diphtheria, tetanus, and pertussis are serious diseases caused by bacteria. Diphtheria and pertussis are spread from person to person. Tetanus enters the body through cuts or wounds.</p> <p>DIPHTHERIA causes a thick covering in the back of the throat.</p> <ul style="list-style-type: none"> • It can lead to breathing problems, paralysis, heart failure, and even death. <p>TETANUS (Lockjaw) causes painful tightening of the muscles, usually all over the body.</p> <ul style="list-style-type: none"> • It can lead to “locking” of the jaw so the victim cannot open his mouth or swallow. Tetanus leads to death in up to 2 out of 10 cases. <p>PERTUSSIS (Whooping Cough) causes coughing spells so bad that it is hard for infants to eat, drink, or breathe. These spells can last for weeks.</p> <ul style="list-style-type: none"> • It can lead to pneumonia, seizures (jerking and staring spells), brain damage, and death. <p>Diphtheria, tetanus, and pertussis vaccine (DTaP) can help prevent these diseases. Most children who are vaccinated with DTaP will be protected throughout childhood. Many more children would get these diseases if we stopped vaccinating.</p> <p>DTaP is a safer version of an older vaccine called DTP. DTP is no longer used in the United States.</p> <p>2 Who should get DTaP vaccine and when?</p> <p>Children should get 5 doses of DTaP vaccine, one dose at each of the following ages:</p> <ul style="list-style-type: none"> • 2 months • 4 months • 6 months • 15–18 months • 4–6 years <p>DTaP may be given at the same time as other vaccines.</p>	<p>(Diphtheria, Tetanus and Pertussis)</p> <p>Many Vaccine Information Statements are available in Spanish and other languages. See www.imzmmz.gov/via Folios de Información Sobre Vacunas están disponibles en Español y en muchos otros idiomas. Visite www.imzmmz.gov/via</p> <p>3 Some children should not get DTaP vaccine or should wait</p> <ul style="list-style-type: none"> • Children with minor illnesses, such as a cold, may be vaccinated. But children who are moderately or severely ill should usually wait until they recover before getting DTaP vaccine. • Any child who had a life-threatening allergic reaction after a dose of DTaP should not get another dose. • Any child who suffered a brain or nervous system disease within 7 days after a dose of DTaP should not get another dose. • Talk with your doctor if your child: <ul style="list-style-type: none"> - had a seizure or collapsed after a dose of DTaP, - cried non-stop for 3 hours or more after a dose of DTaP, - had a fever over 105°F after a dose of DTaP. <p>Ask your doctor for more information. Some of these children should not get another dose of pertussis vaccine, but may get a vaccine without pertussis, called DT.</p> <p>4 Older children and adults</p> <p>DTaP is not licensed for adolescents, adults, or children 7 years of age and older.</p> <p>But older people still need protection. A vaccine called Tdap is similar to DTaP. A single dose of Tdap is recommended for people 11 through 64 years of age. Another vaccine, called Td, protects against tetanus and diphtheria, but not pertussis. It is recommended every 10 years. There are separate Vaccine Information Statements for these vaccines.</p>



Our Mission: To protect and improve the health and environment of all Kansans

Legal Requirements for Vaccine Information Statements

1. Before an NCVIA-covered vaccine is administered to anyone (this includes adults!), you must give the patient or the parent/legal representative a copy of the most current VIS available for that vaccine. Make sure you give your patient time to read the VIS prior to the administration of the vaccine.
2. Record in the patient's chart - date the VIS was given and VIS publication date.
3. **VIS forms may not be altered.**

www.immunize.org/vis



Our Mission: To protect and improve the health and environment of all Kansans

Vaccine Administration

- **Documentation Requirements**
 - Current Vaccine Information Statement (VIS)
 - Document publication date of VIS
 - Vaccine Name
 - Vaccine Manufacturer
 - Vaccine Lot Number
 - Vaccine Expiration Date
 - Site
 - Route
 - Name and title of person administering vaccine

Vaccine Administration

Our Mission: To protect and improve the health and environment of all Kansans



Contraindication

Condition in a recipient that greatly increases the chance of a serious adverse reaction. It is a condition in the recipient of the vaccine, not with the vaccine per se. If the vaccine were given in the presence of that condition, the resulting adverse reaction could seriously harm the recipient.

For instance, administering influenza

- vaccine to a person with a true anaphylactic allergy to egg could cause serious illness or death in the recipient. In general, vaccines should not be administered when a contraindication condition is present.

Contraindications and Precautions

<u>Condition</u>	<u>Live</u>	<u>Inactivated</u>
Allergy to component	C	C
Encephalopathy	---	C
Pregnancy	C	V*
Immunosuppression	C	V
Severe illness	P	P
Recent blood product	P**	V

C=contraindication **P**=precaution **V**=vaccinate if indicated
*except HPV and Tdap. **MMR and varicella-containing
(except zoster vaccine), and rotavirus vaccines only

Invalid Contraindications

- Minor Illness
- Antibiotic Therapy
- Recent Exposure to Infectious Illness
- Convalescence from Acute Illness
- Low Grade Fever (e.g. 100.4° F [38°C])
- Nonspecific Allergies

Invalid Contraindications

- Non-anaphylactic Allergies
- Pregnancy within the household
- Breastfeeding
- Premature Birth
- Family History of
 - SIDS
 - Seizures
 - Adverse Events

Guide to Contraindications and Precautions for Commonly Used Vaccines

Immunization Manual, Vaccine Section A

<http://www.cdc.gov/vaccines/recs/vac-admin/contraindications-vacc.htm>

Prior to giving any vaccine evaluate the benefit of giving the vaccine against the risk of not giving that vaccine.

Precaution

Similar to a contraindication

A precaution *might increase* the chance or severity of a serious adverse reaction, or that might compromise the ability of the vaccine to produce immunity

Vaccine Preparation

- Remember the 5”R’s”
 - Right Patient
 - Right Vaccine
 - Right Dose
 - Right Route
 - Right Time Interval
- Check Vaccine for
 - Check Vial for Damage
 - Check Vial for Contamination
 - Check Vial for Expiration

Vaccine Preparation Continued

- If reconstitution of vaccines is necessary, reconstitute **ONLY** with diluents supplied for specific antigen. **DO NOT MIX** diluents
- Choose correct needle gauge and length

Vaccines Sites

- Intramuscular (IM)
 - Injections are administered into muscle tissue below the dermis and SC tissue
- Sites
 - There are several IM injection sites on the human body
 - The recommended sites for vaccine administration are the vastus lateralis muscle (anterolateral thigh) and the deltoid

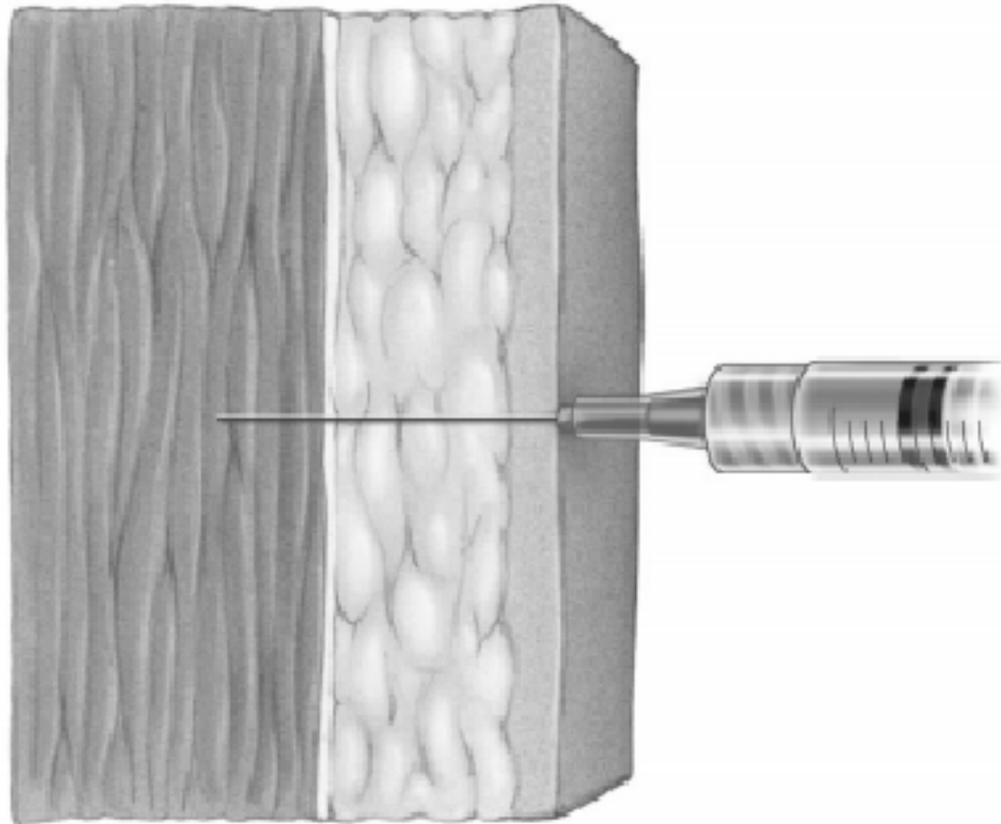
Size and Length

- Needle Gauge
 - 22 to 25 gauge needle
- Needle Length
 - Needle length must be adequate to reach the muscle and is based on the size of the individual
 - **Infant**
 - 7/8 to 1 inch
 - **Toddler & Older Children**
 - 7/8 to 1 1/4 inch
 - **Adults**
 - 1 to 1 1/2 inch

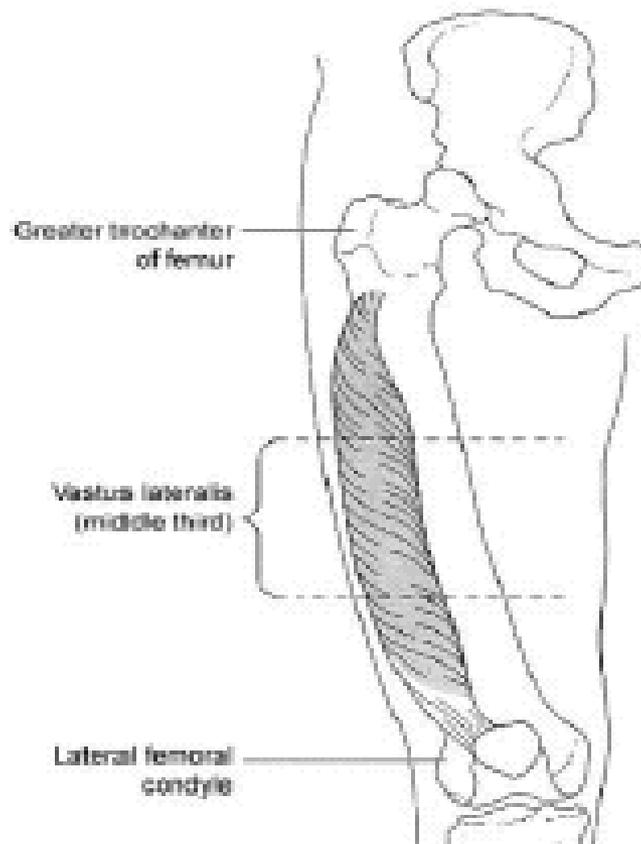
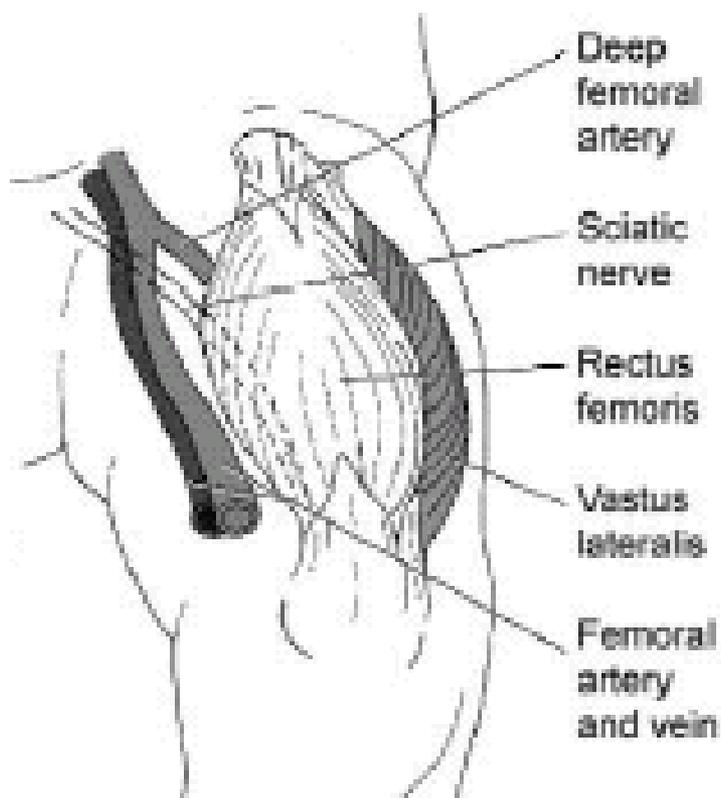
IM Injection Technique

- To avoid injection into SC tissue, insert the needle fully into the muscle at a 90 degree angle

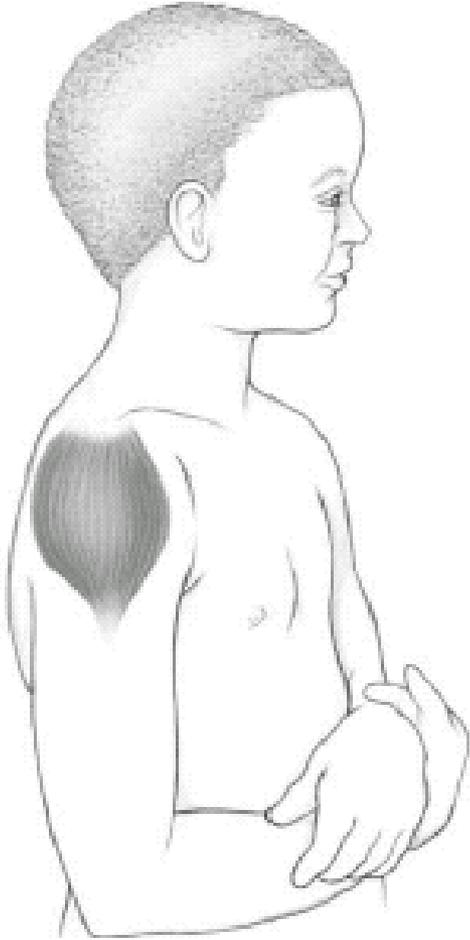
Needle Angle for Intramuscular Injections



Intramuscular Sites



Our Mission: To protect and improve the health and environment of all Kansans



Our Mission: To protect and improve the health and environment of all Kansans



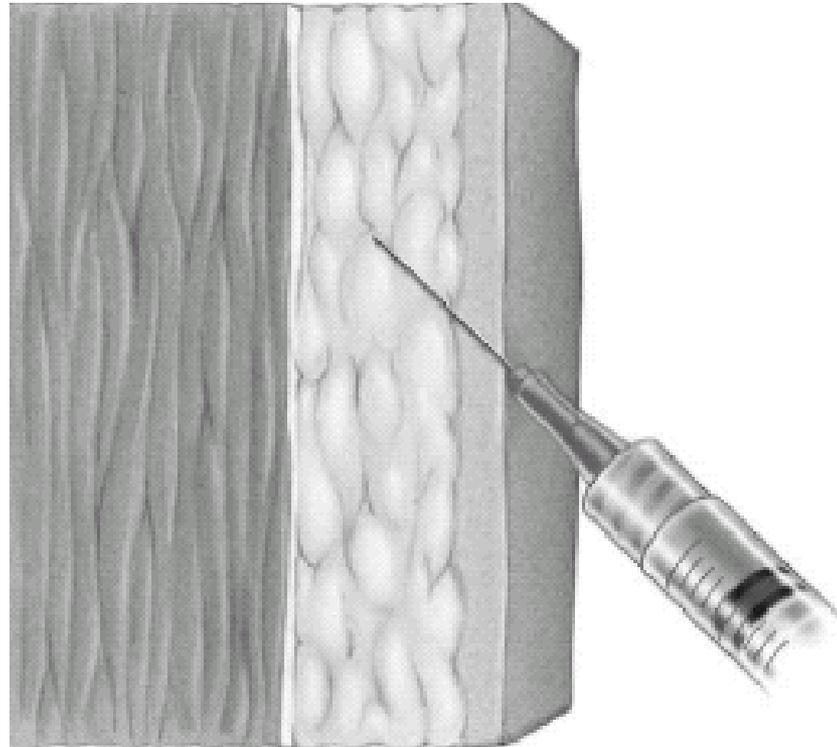
Subcutaneous

- Needle Gauge
 - 23 to 25 gauge needle
- Needle Length
 - 5/8 inch
- Technique
 - To avoid reaching the muscle, the fatty tissue is pinched up, the needle is inserted at a 45 degree angle and the vaccine is injected into the tissue

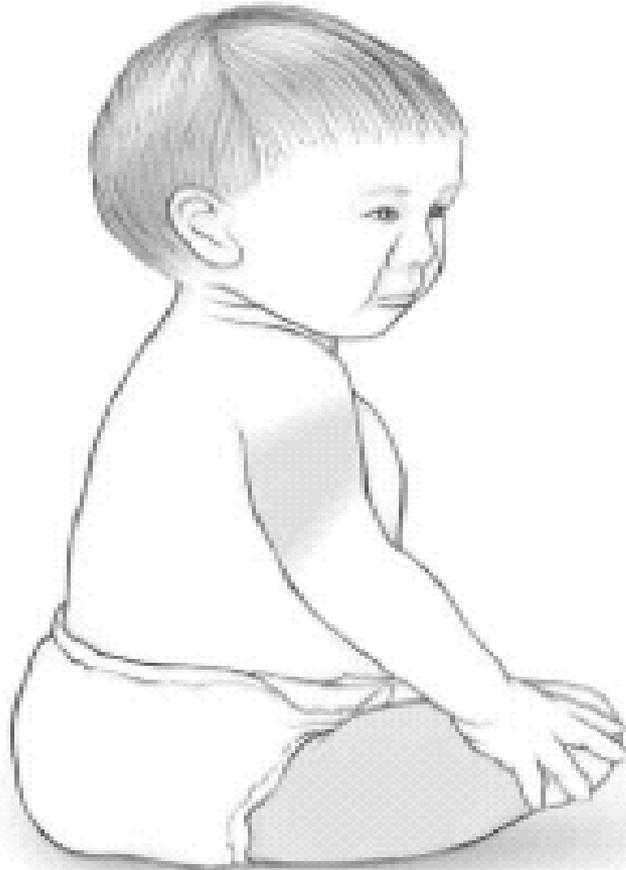
Subcutaneous Vaccine Administration

- Subcutaneous (SC)
 - Injections are administered into the fatty tissue found below the dermis and above the muscle.
 - SC tissue can be found all over the body. Usual sites for vaccine administration are the thigh and upper outer triceps of the arm.

Needle Angle for Subcutaneous Injections



Subcutaneous Injection Sites



Do Not Give Vaccinations Where?

- The buttocks should not be used to administer vaccines

Forms and Resources

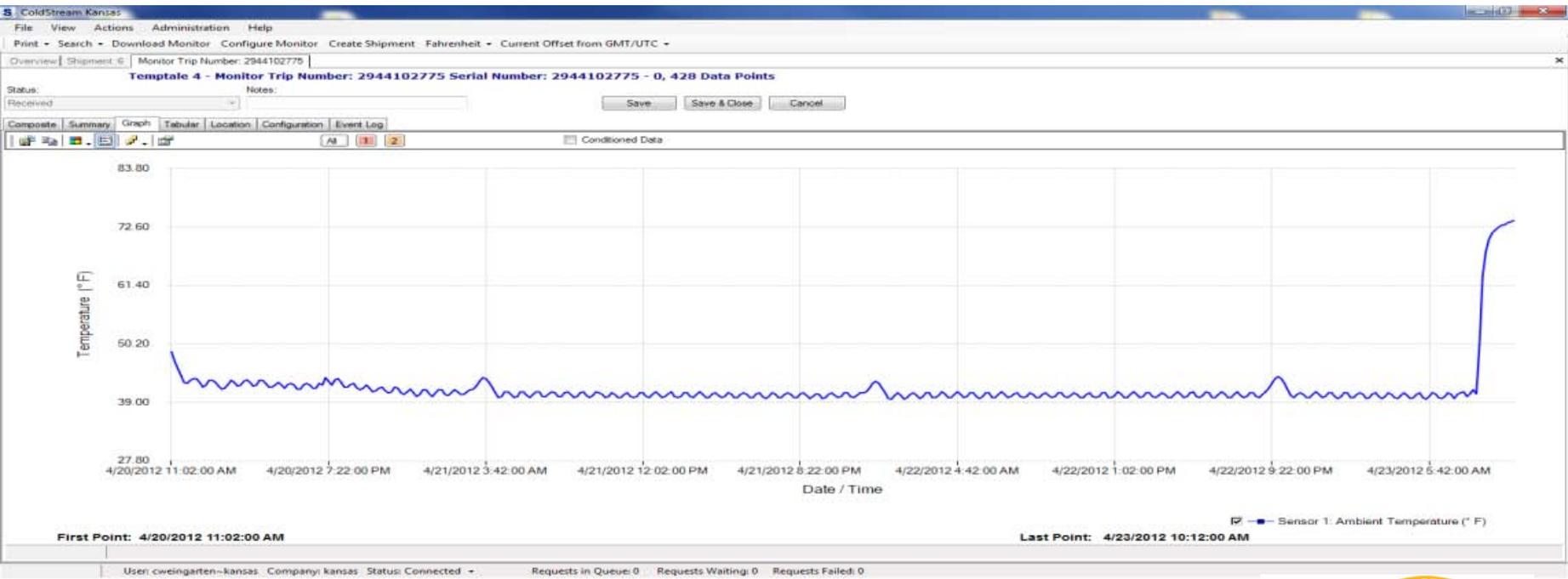


Our Mission: To protect and improve the health and environment of all Kansans

TempTale 4 Data Logger



Our Mission: To protect and improve the health and environment of all Kansans



Our Mission: To protect and improve the health and environment of all Kansans

Administration Help

Load Monitor Configure Monitor Create Shipment Fahrenheit ▾ Current Offset from GMT/UTC ▾

Search Results Monitor Trip Number: 2952103859

Temptale 4 - Monitor Trip Number: 2952103859 Serial Number: 2952103859 - 3189, 560

Notes:

monthly for May

Save

Graph Tabular Location Configuration Event Log

Date / Time	Sensor 1: Ambient Temper	Location	Alarms	
0/2013 6:16:27 AM	40.10			
0/2013 6:26:27 AM	40.80			
0/2013 6:36:27 AM	39.70			
0/2013 6:46:27 AM	40.10			
0/2013 6:56:27 AM	40.80			
0/2013 7:06:27 AM	39.90			
0/2013 7:16:27 AM	39.90			
0/2013 7:26:27 AM	40.80			
0/2013 7:36:27 AM	39.90			
0/2013 7:46:27 AM	39.90			
0/2013 7:56:27 AM	40.50			
0/2013 8:06:27 AM	40.50			

KANSAS IMMUNIZATION PROGRAM
Thermometer Data Logger User Agreement

Provider Name: _____ Pin#: _____

The Centers for Diseases Control (CDC) Vaccine for Children (VFC) program requires twice daily monitoring and recording of refrigerator and freezer temperatures, and monthly reporting of the same to the Kansas Immunization Program (KIP).

Data loggers collect vaccine storage unit temperature data 24 hours a day, 7 days a week. Data loggers allow for improved temperature accountability and will assist in decreasing the amount of wasted VFC vaccine due to unknown storage unit temperatures.

This Provider Thermometer Data Logger User Agreement describes the agreement between KIP and the Provider for use of the program-supplied data logger.

KIP shall:

1. Provide a maximum of two (2) TempTale[®]4 USB Multi-Alarm Monitors (data loggers) per calibration period. Calibration period is typically for one year from the date of shipment and is found on the calibration certificate of each monitor.
2. Educate Provider on installation and use of the data logger
3. Assist Provider with ongoing education and use of the data loggers.
4. Contract with Sensitech for a maximum of two (2) standard downloads per month.

Provider shall:

1. Install, complete the setup and use data loggers as directed by Sensitech and KIP.
2. Record refrigerator or freezer temperature twice daily on paper temperature logs and maintain the paper logs for three (3) years as stipulated by the CDC.
3. Download temperature data monthly, by the 10th of the following month, to KIP.
4. Maintain program-supplied data loggers in a manner to prevent damage, theft or destruction.
5. Replace damaged, destroyed or stolen data loggers at a cost of \$100.00 each.

This Agreement may be terminated upon 14 days' notice by either KIP or Provider. In the event of termination the Provider shall return program-supplied data loggers to KIP.

Provider's Authorized Signature: _____

Date: _____

KIP/Provider Data Logger User Agreement
May 2012



Our Mission: To protect and improve the health and environment of all Kansans

FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind—United States • 2013

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

Persons aged 4 months through 6 years					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4	Dose 4 to dose 5
Hepatitis B ¹	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the final dose is 24 weeks		
Rotavirus ²	6 weeks	4 weeks ²	4 weeks ²		
Diphtheria, tetanus, pertussis ³	6 weeks	4 weeks	4 weeks	6 months	6 months ⁴
Human papillomavirus type 2 ⁵	6 weeks	4 weeks If first dose administered at younger than age 12 months 8 weeks (in final dose) If first dose administered at age 12–14 months No further doses needed If first dose administered at age 15 months or older	4 weeks ² If current age is younger than 12 months 8 weeks (in final dose) If current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered younger than 15 months No further doses needed If previous dose administered at age 15 months or older	8 weeks (in final dose) This dose only necessary for children aged 12 through 50 months who received 3 doses before age 12 months	
Pneumococcal ⁶	6 weeks	4 weeks If first dose administered at younger than age 12 months 8 weeks (in final dose for healthy children) If first dose administered at age 12 months or older or current age 24 through 50 months No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks If current age is younger than 12 months 8 weeks (in final dose for healthy children) If current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (in final dose) This dose only necessary for children aged 12 through 50 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated poliovirus ⁷	6 weeks	4 weeks	4 weeks	6 months ⁷ minimum age 9 years for final dose	
Meningococcal ⁸	6 weeks	8 weeks ⁷	see footnote 11	see footnote 11	
Mumps, measles, rubella ⁹	12 months	4 weeks			
Varicella ⁹	12 months	3 months			
Hepatitis A ¹	12 months	6 months			
Persons aged 7 through 18 years					
Tetanus, diphtheria, tetanus, diphtheria, pertussis ³	7 years ⁴	4 weeks	4 weeks if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months	
Human papillomavirus ⁵	9 years		4 weeks if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months	
Hepatitis A ¹	12 months	6 months	see footnote 11		
Hepatitis B ¹	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated poliovirus ⁷	6 weeks	4 weeks	4 weeks ⁷	6 months ⁷	
Meningococcal ⁸	6 weeks	8 weeks ⁷			
Mumps, measles, rubella ⁹	12 months	4 weeks			
Varicella ⁹	12 months	3 months if person is younger than age 13 years 4 weeks if person is aged 13 years or older			

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/acip-list.htm>.

- Hepatitis B (HepB) vaccine.** (Minimum age birth)
 - Routine vaccination:**
 - 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 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after completion of the HepB series, at age 9 through 18 months (and at the end of each decade).
 - If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine to all infants regardless of birth weight. For infants weighing <2000 grams, administer HBIG in addition to HepB within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if she is HBsAg positive, also administer HBIG to infants weighing >2000 grams (not later than age 1 week).
 - Dose following the birth dose:**
 - The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for dose administered earlier age 6 weeks.
 - Infants who did not receive birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1 to 2 months, and 5 months starting as soon as feasible. See Figure 2.
 - 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 HepB vaccine series should be administered no earlier than age 24 weeks and at least 16 weeks after the first dose.
 - Administration of a total of 4 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.
 - A 3-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
 - For other catch-up uses, see Figure 2.
- Rotavirus (RV) vaccine.** (Minimum age 6 weeks for both RV-1 (Rotarix) and RV-2 (RotaTeq).)
 - Routine vaccination:**
 - Administer a series of RV vaccine to all infants as follows:
 - RV-1 is used; administer a 2-dose series at 2 and 4 months of age.
 - RV-2 is used; administer a 3-dose series at ages 2, 4, and 6 months.
 - If any dose in series was RV-1 or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be administered.
 - Catch-up vaccination:**
 - The maximum age for the first dose in the series is 14 weeks, 0 days.
 - Vaccination should not be indicated for infants aged 15 weeks 0 days or older.
 - The maximum age for the final dose in the series is 18 months, 0 days.
 - RV-1 (Rotarix) is administered for the first and second doses; a third dose is not indicated.
 - For other catch-up uses, see Figure 2.
- Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.** (Minimum age 6 weeks)
 - Routine vaccination:**
 - Administer 4–5-dose series of DTaP vaccine at ages 2, 4, 6, 15–18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
 - Catch-up vaccination:**
 - The RV-2 (RotaTeq) dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.
 - For other catch-up uses, see Figure 2.
- Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine.** (Minimum age 10 years for Boostrix, 11 years for Adacel.)
 - Routine vaccination:**
 - Administer 1 dose of Tdap vaccine to all adults (including 11 through 12 years).
 - Tdap can be administered regardless of time interval since the last tetanus and diphtheria toxoid-containing vaccine.



Our Mission: To protect and improve the health and environment of all Kansans

Vaccine Freezer Setup

Preparing for Vaccine Storage

1 Put cold packs in areas where vaccines should not be stored, including the freezer door and on the top shelf of the freezer.



The diagram shows two views of a freezer. On the left, the freezer door is open, and three blue cold packs are placed inside. On the right, the freezer is closed, and three blue cold packs are placed on the top shelf. Red arrows point to the cold packs in both views.

2



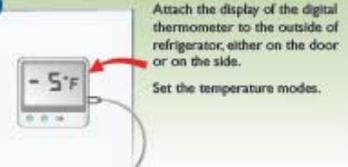
The diagram shows three scenarios for thermometer placement. On the left, a stand-alone freezer has a digital thermometer on the door and a liquid-filled thermometer on the top shelf. In the middle, a stand-alone freezer has a digital thermometer probe and a back-up thermometer in the center. On the right, a combination unit freezer has a digital thermometer probe and a back-up thermometer in the center of the freezer floor.

Two thermometers are needed to ensure accurate temperatures. Many practices use a digital thermometer as the primary thermometer and a liquid-filled or dial thermometer as the back-up.

In a stand-alone freezer, place the digital thermometer probe and the back-up thermometer in the center of the freezer, next to the vaccine.

In a combination unit freezer, place the probe of the digital thermometer and the back-up thermometer in the center of the freezer floor.

3



The diagram shows a digital thermometer with a display showing -5°F. A red arrow points to the display. Below the display, there are two buttons labeled 'cold' and 'warmer'.

Attach the display of the digital thermometer to the outside of refrigerator, either on the door or on the side.

Set the temperature modes.

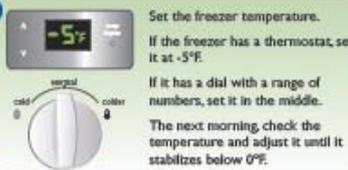
4



The diagram shows a hand plugging a cord into a wall outlet. A blue arrow points from the outlet to a warning sign that says 'WARNING! Do Not Unplug'.

Plug in the freezer. Secure with plug guard/cover. Post "Do Not Unplug" sign.

5



The diagram shows a dial thermometer with a display showing -5°F. Below the display, there is a dial with three settings: 'cold', 'neutral', and 'warmer'.

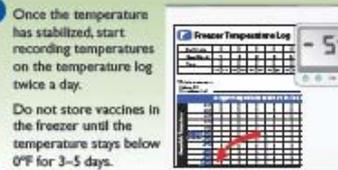
Set the freezer temperature.

If the freezer has a thermostat, set it at -5°F.

If it has a dial with a range of numbers, set it in the middle.

The next morning, check the temperature and adjust it until it stabilizes below 0°F.

6



The diagram shows a 'Freezer Temperature Log' table and a digital thermometer. The table has columns for 'Date', 'Time', and 'Temperature'. The digital thermometer shows -5°F.

Once the temperature has stabilized, start recording temperatures on the temperature log twice a day.

Do not store vaccines in the freezer until the temperature stays below 0°F for 3-5 days.

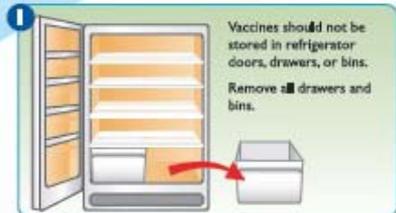
www.eziz.org

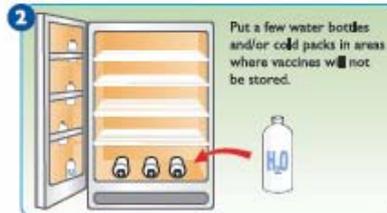
California Department of Public Health, Immunization Branch

IH-5-965 (8/09)

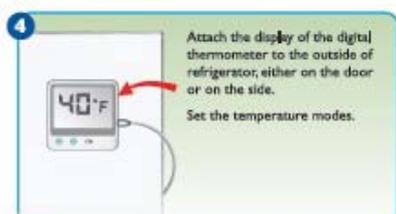
Vaccine Refrigerator Setup

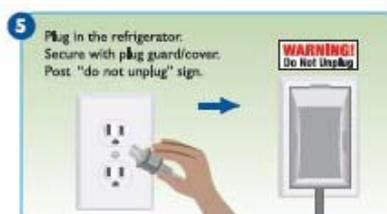
Preparing for Vaccine Storage

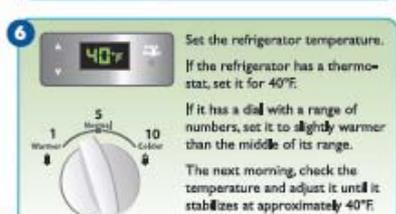
- 

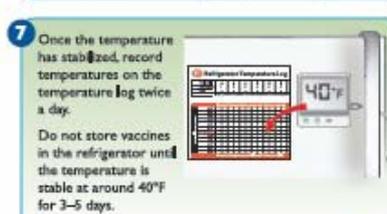
Vaccines should not be stored in refrigerator doors, drawers, or bins. Remove all drawers and bins.
- 

Put a few water bottles and/or cold packs in areas where vaccines will not be stored.
- 

Two thermometers are needed to ensure accurate temperatures. Many practices use a digital thermometer as the primary and a liquid-filled or dial thermometer as the back-up. Place the probe of the digital thermometer in the center of the refrigerator. Place the back-up thermometer next to the probe.
- 

Attach the display of the digital thermometer to the outside of refrigerator, either on the door or on the side. Set the temperature modes.
- 

Plug in the refrigerator. Secure with plug guard/cover. Post "do not unplug" sign.
- 

Set the refrigerator temperature. If the refrigerator has a thermostat, set it for 40°F. If it has a dial with a range of numbers, set it to slightly warmer than the middle of its range. The next morning, check the temperature and adjust it until it stabilizes at approximately 40°F.
- 

Once the temperature has stabilized, record temperatures on the temperature log twice a day. Do not store vaccines in the refrigerator until the temperature is stable at around 40°F for 3-5 days.

www.eziz.org

California Department of Public Health, Immunization Branch

PH1462 (10/17)

Safeguard Your Power Supply

Protect plug and outlet



Plug in unit to a nearby outlet.

Secure plug with a guard/cover.

Post "Do Not Unplug" signs near outlet.

Always avoid disruption of power



Do not use extension cords.



Do not plug more than one appliance into an outlet. This will prevent tripping of circuit breakers.



Do not use outlets that are controlled by wall switches.



Never unplug the vaccine refrigerator or freezer.

If you experience a power failure, do not open refrigerator/freezer doors. If it lasts more than 4-6 hours, call the VFC Program.

• VFC Program Office (877) 243-8832

• VFC Field Representative

www.eztz.org

California Department of Public Health, Immunization Branch

PH-1967 (8/09)

Vaccine Refrigerator Setup

Storing Vaccines

Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Refrigerate all vaccines except MMRV, Varicella, and Zoster.

Refrigerator in a Combination Unit

Usable space is limited (inside dashed lines).

The diagram shows a refrigerator with several shelves and drawers. A dashed line indicates the usable space. Various items are placed on the shelves, including vaccine boxes and baskets. Callouts provide instructions on how to store vaccines correctly and what to avoid.

- Place vaccine in breathable plastic mesh baskets and clearly label baskets by type of vaccine.
- Group vaccines by pediatric, adolescent, and adult types.
- Separate the YFC vaccine supply from privately purchased vaccine.
- Keep baskets 2-3 inches from walls and other baskets.
- Keep vaccines in their original boxes until you are ready to use them.
- Store only vaccine and other medication in vaccine storage units.
- Keep vaccines with shorter expiration dates to front of shelf. If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the YFC Program.
- Keep temperatures between 35°F to 46°F. Aim for 40°F. Below 35°F is too cold! Cold VFC. Above 46°F is too warm! Hot VFC.
- Keep vaccine away from all cold air vents. The vents blow in very cold air from the freezer which can damage vaccines.
- No food in refrigerator.
- No vaccine in doors.
- No vaccine in solid plastic trays or containers.
- No vaccine in drawers or on floor of refrigerator.

If you have any problems with your refrigerator, keep the refrigerator door shut and notify the California YFC Program.

• YFC Program Office (877) 243-8832

• YFC Field Representative

www.eziz.org

California Department of Public Health, Immunization Branch

IPV-964 (12/09)

Vaccine Freezer Setup

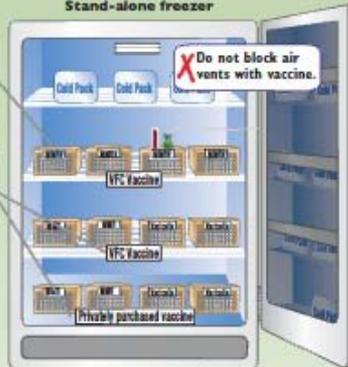
Storing Vaccines

Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Freeze MMR, MMRV, Varicella, and Zoster vaccines.

Stand-alone freezer

✓ Place vaccine in breathable plastic mesh baskets and clearly label baskets by type of vaccine.

✓ Separate the YFC vaccine supply from privately purchased vaccine.



✓ Keep vaccines with shorter expiration dates to front of shelf.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the YFC Program.



✓ Keep temperatures 5°F or colder.

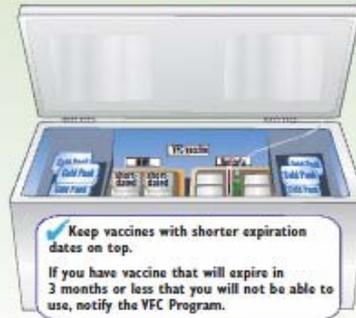
Aim for 0°F and below

Colder is better.



Above 5°F is too warm! Call YFC.

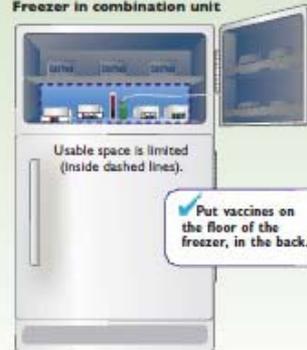
Chest freezer



✓ Keep vaccines with shorter expiration dates on top.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the YFC Program.

Freezer in combination unit



Usable space is limited (inside dashed lines).

✓ Put vaccines on the floor of the freezer, in the back.

If you have any problems with your refrigerator, keep the refrigerator door shut and notify the California YFC Program.

• YFC Program Office (877) 243-8832

• YFC Field Representative

www.eztz.org

California Department of Public Health, Immunization Branch

IPHS-966 (1/10/9)

Vaccine Refrigerator Setup

Storing Vaccines

Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Refrigerate all vaccines except MMRV, Varicella, and Zoster.

Refrigerator-only Unit

Almost all of the space is usable (inside dashed lines).

✓ Place vaccine in breathable plastic mesh baskets and clearly label baskets by type of vaccine.

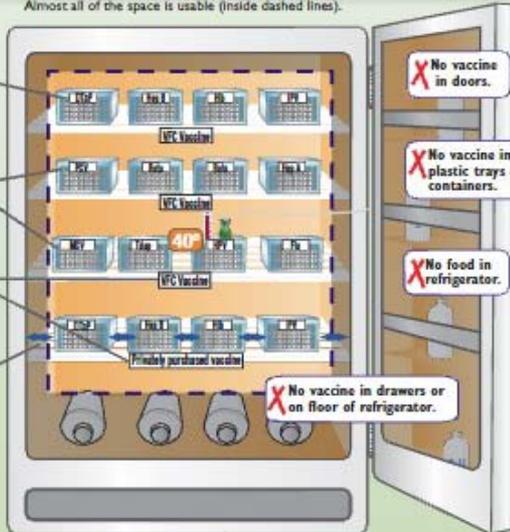
✓ Group vaccines by pediatric, adolescent, and adult types.

✓ Separate the YFC vaccine supply from privately purchased vaccine.

✓ Keep baskets 2-3 inches from walls and other baskets.

✓ Keep vaccines in their original boxes until you are ready to use them.

✓ Store only vaccine and other medication in vaccine storage units.



✓ Keep vaccines with shorter expiration dates to front of shelf.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the YFC Program.



✓ Keep temperatures between 35°F to 46°F.



If you have any problems with your refrigerator, keep the refrigerator door shut and notify the California YFC Program.

• YFC Program Office (877) 243-8832

• YFC Field Representative

www.eziz.org

California Department of Public Health, Immunization Branch

09M-963 (12/09)

Temperature Log for Vaccines (Fahrenheit)

VFC PIN #: _____ Month: _____ Year: _____ Days 1-15

Place an "X" in the box that corresponds with the temperature. The hashed zones represent unacceptable temperature ranges. If the temperature recorded in the this zone: 1. Store the vaccine under proper conditions as quickly as possible; 2. Call the vaccine manufacturer(s) to determine whether the potency of the vaccine(s) has been affected; 3. Call the Kansas Immunization Program at 785-296-5591 for further assistance; 4. Document the action taken in the section provided below.

Rev. 8-24-04

Day of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Exact Time															
°F Temp															
≥49°															
48°															
47°															
46°															
45°															
44°															
43°															
42°															
41°															
40°															
39°															
38°															
37°															
36°															
35°															
34°															
33°															
32°															
31°															
30°															
29°															
≤28°															
Freeze Temp															
>8°															
7°															
6°															
5°															
4°															
≤3°															
Staff Initials															

Take Immediate Action if Temperature is in the Shaded Area!

Take Immediate Action if Temperature is in the Shaded Area!

Vaccine Storage Troubleshooting Report (If additional space needed, attach documentation.)

Date	Time	Unit Temp	Problem	Action Taken	Results	Initials

Kansas Immunization Program • 1000 SW Jackson, Suite 210, Topeka, KS 66612-1274 • Phone 785-296-5591 • Fax 785-296-6510 • www.kdhe.state.ks.us/immunize



Our Mission: To protect and improve the health and environment of all Kansans

1. Current temperature of refrigerator: _____ Min/temperature reached: _____
2. Current temperature of freezer: _____ Min/temperature reached: _____
3. Amount of time temperature was outside normal range: refrigerator _____ freezer _____

REFRIGERATOR

Vaccine and Lot #	Expiration Date	Amount of Vaccine

FREEZER

Vaccine and Lot #	Expiration Date	Amount of Vaccine

CALL ALL MANUFACTURERS(S) OF AFFECTED VACCINE(S):

Manufacturer	Telephone Number
Sanofi Pasteur	1-800-822-2463
Merck	1-800-809-4618
GlaxoSmithKline	1-888-825-8249
Wyeth	1-800-999-9384
Novartis	1-800-244-7888
Medimmune	1-877-633-4411
Kansas Immunization Program	1-785-286-5591



Our Mission: To protect and improve the health and environment of all Kansans

Routine Vaccine Storage and Handling Plan Worksheet

Complete the following checklist and forms and store this information in an easily accessible area near the vaccine storage unit. See the CDC's [Vaccine Storage and Handling Plans](http://www2a.cdc.gov/vaccines/dstoolkit/) (<http://www2a.cdc.gov/vaccines/dstoolkit/>) for details.

Checklist of Resources for the Routine Vaccine Storage and Handling Plan

- Up-to-date contact information
 - Primary and backup vaccine coordinators
 - State and local health department immunization program
 - Manufacturers of the vaccines in your inventory
 - Refrigerator and freezer maintenance and repair company(ies)
 - Vaccine storage unit alarm company (if applicable)
 - Sources for packing materials and certified calibrated thermometers
- Descriptions of the roles and responsibilities of the primary and backup vaccine coordinators
- Summaries of the storage requirements for each vaccine and diluent in your inventory
- Protocols for vaccine storage unit temperature monitoring
- Protocols for vaccine storage equipment maintenance
- Protocols for the correct placement of vaccine(s) within storage units
- Protocols for responding to vaccine storage and handling problems
- Protocols for vaccine inventory management
- Protocols for transporting and receiving vaccine shipments
- Policies for preparing vaccine for administration
- Protocols for proper disposal of vaccines (expired/wasted/used) and supplies
- Samples of the forms used in your vaccination program

Vaccine Coordinators

Vaccine Coordinators	Title	Telephone Numbers
Primary		
Backup		

Resources Contact List

Resources	Contact Person (Title)		Telephone Numbers
State Health Department Immunization Program			
Local Health Department Immunization Program			
Emergency Resources	Company Name	Contact Person	Telephone Numbers (home, cell, beepers)
Electric Power Company			

Emergency Resources	Company Name	Contact Person (Title)	Telephone Numbers (home, cell, beeper)
Generator Repair Company (if applicable)			
Generator Fuel Source (if applicable)			
Refrigeration Repair Company			
Temperature Alarm Monitoring Company, if Applicable			

Packing Materials

Insulated Containers or Coolers			
Fillers (e.g., crumpled paper, bubble wrap)			
Refrigerated/Frozen Packs			
Dry Ice Vendor (if available; includes vial/celle-containing vaccines)			
Certified Calibrated Thermometers			

Roles and Responsibilities

1) Accepts Vaccine Deliveries, Unpacks & Stores Vaccine

Name	Title	Telephone Number
Primary		
Backup		

2) Monitors and Records Twice Daily Temperatures & Maintain Temperature Log Files

Name	Title	Telephone Number
Primary		
Backup		

3) Conducts Monthly Inventory; Orders Vaccines; Labels for use; Rotates stock

Name	Title	Telephone Number
Primary		
Backup		

4) Reviews & updates clinic policies & procedures; Assures equipment working order/certifications current

Name	Title	Telephone Number
Primary		
Backup		

**NOTIFICATION OF CHANGE IN VFC CONTACT
KANSAS IMMUNIZATION PROGRAM**

Pin Number: _____
Date contact changed: _____ Changed- Primary ___ Backup ___ Both ___
Clinic Name: _____
Name of New Contact (Primary): _____
New Primary Contact E-mail Address: _____
Telephone # _____
Contact VFC (Backup): _____
Telephone# _____

The Vaccine for Children Program requires new Primary and Backup contacts must submit certificates of completion to the Kansas Immunization Program for the learning modules listed below within 30 days of being assigned the VFC responsibilities.

“CDC VFC Requirements-You Call the Shots” and the “Storage and Handling-You Call the Shots” modules are found: <http://www.cdc.gov/vaccines/ed/youcalltheshots.htm>

Submit the certificates of completion to:

Contact Information

Betty Grindol LPN

316-337-6032

berindol@kdhhs.gov

Rev 2.13



Our Mission: To protect and improve the health and environment of all Kansans



Sam Brownback, Governor
Robert Moser, MD, Secretary

- Home
- Public Health
- Environment
- Health Care Finance
- Laboratories
- News

[BDCP - Kansas Immunization Program](#)



A to Z Topic Listing

- [Kansas Immunization Program Home](#)
- [Bureau of Disease Control & Prevention](#)
- [Seasonal Influenza](#)
- [Contact Information](#)

Diseases

- 2012-2013 Influenza Information
- Biological Diseases
- CDC Manual of Surveillance of VPD-4th Edition
- Disease Protocols
- KDHE Diagnostic Microbiology Section
- Laboratory Quick Reference Guide

Kansas Immunization Program

Welcome to the Kansas Immunization Program!

The Kansas Immunization Program is committed to keeping Kansans free of vaccine preventable diseases.



2012-2013 Flu Season Info
Seasonal Flu PSA's

Resources

- Epidemiology and Prevention of Vaccine Preventable Diseases “The Pink Book” 12th edition, revised May 2011
- <http://www.cdc.gov/vaccines/pubs/pinkbook>
- CDC National Immunization Program
- <http://www.cdc.gov/vaccines/>
- CDC National Immunization Hotline:
 - English (800) 232-2522
 - Spanish (800) 232-0233



Resources Continued

- Immunization Action Coalition
 - www.immunize.org
- Kansas Immunization Program
 - 1000 SW Jackson, Suite 210
 - Topeka, Kansas 66612-1274
 - (785) 296-5591
 - www.kdheks.gov/immunize

Questions





www.kdheks.gov

Our Mission: To protect and improve the health and environment of all Kansans.