



Protecting, maintaining and improving the health of all Minnesotans

April 30, 2009

To: MnVFC Providers

From: MnVFC Program

Re: Deadline for discontinuing use of dorm-style refrigerators for MnVFC vaccine

Route to:

- Clinic manager
- Medical director
- Director of nursing
- Immunization manager
- Vaccine coordinator

Effective January 1, 2010, MnVFC will no longer allow the use of small dormitory-style refrigerator/freezers with a single door to store vaccines. Dorm-style refrigerator/freezers have an evaporator plate (cooling coil) inside the freezer compartment in the refrigerator, making it difficult to regulate the temperature. This new policy will bring Minnesota into compliance with CDC's requirement that dormitory-style refrigerators cannot be used to store VFC vaccine after December 31, 2009.

Why this new deadline? Protecting vaccine is a top priority of the MnVFC program and dorm-style refrigerators are just not up to the task. These units have limited ability to control temperatures in both the refrigerator and freezer compartments resulting in significant temperature variations, plus or minus 10 degrees, in different spots. In order to keep the freezer cold enough to store frozen vaccine, the refrigerator usually becomes too cold for refrigerated vaccines. Even if you carefully monitor temperatures in a dorm-style unit and find them to be stable, these units put vaccines at too much risk for a storage mishap.

We recognize the financial burden that replacing dormitory-style units may impose on your clinic. However, please consider the significant value of the vaccines being stored. At any given time, the average provider stores thousands of dollars worth of public and private vaccines. For example, when you order just 10 doses of varicella vaccine at the CDC contract price, the cost is \$750. Similarly 10 doses of HPV vaccine costs \$1200. The price of privately purchased vaccine is even greater. The cost of a new refrigerator or freezer pales in comparison. Particularly in these difficult economic times, we just can't afford to waste valuable vaccine.

To assist you in planning to replace dorm-style units, we have attached a new piece called *Acceptable Refrigerators and Freezers for Storing Vaccine*.

Interim guidelines for use of dorm-style refrigerators

As mentioned in the *2008 MnVFC Policies and Procedures Manual* on page 16, if you must use a dorm-style refrigerator to store vaccine between now and the end of 2009, follow these guidelines:

- Use it only for temporary storage (less than 12 hours) of a day's worth of refrigerated vaccine.
- Make sure the refrigerator compartment is maintaining a temperature of 35°-46° F (2°-8°C). Check and record temperatures twice a day.
- Never use a dorm-style unit to store frozen MMRV, varicella, or zoster vaccines.

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- Tape the freezer compartment shut, and mark it “Do Not Use.”
- Store a small enough volume of vaccine to allow air circulation.
- Never store vaccine on the top shelf, because of its close proximity to the freezer and the potential for freezing vaccine. Store water bottles and MMR vaccine on the top shelf to protect refrigerator-only vaccines from colder temperatures.
- Empty the unit and return all vaccine to a more reliable refrigerator at the end of the day.

If you have questions or concerns, please call the MnVFC program at 651-201-5522 or 1-800-657-3970.

Thank you.




Attachment

Specifications for Refrigerators and Freezers Used to Store Vaccine

Clinics increasingly store thousands of dollars worth of vaccine at a given time, so careful selection of refrigerators and freezers is essential. Purchasing a good quality unit is a reasonable investment – particularly when compared with the value of MnVFC vaccines stored by a medium volume provider (an average of \$20,000). For example, when you order just 10 doses of varicella vaccine at the CDC contract price, the cost is \$750. Similarly 10 doses of HPV vaccine costs \$1200. The price of privately purchased vaccine is even greater. Having effective refrigerators and freezers prevents costly vaccine losses for which a practice may be held financially responsible.

Before buying a refrigerator or freezer:

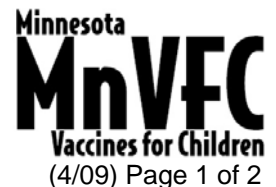
- Do some research. Look online. Contact other clinics. Obtain expert advice by talking to a sales representative.
- Look into maintenance and warranty plans offered by the manufacturer or retailer for parts and the compressor.
- Make sure the unit meets the specifications below.
- Base your choice on the amount of vaccine your clinic stores each year, both MnVFC and private purchase. If you are not sure of your annual usage, call the MnVFC program at 651-201-5522.

Volume	Approximate doses/year	Recommended refrigerators/freezers	
High	10,000 or more	<ul style="list-style-type: none"> • Purpose-built (lab or pharmacy grade) refrigerator-only or freezer-only unit designed for optimum cooling capacity and stable temperature control 	
Medium	2,000-10,000	<p>In order of preference, with the first being the best:</p> <ul style="list-style-type: none"> • Purpose-built (lab or pharmacy grade) refrigerator-only or freezer-only unit designed for optimum cooling capacity and stable temperature control • Household refrigerator-only or freezer-only unit (can be an under-counter model) 	
Low	2,000 or less	<p>In order of preference, with the first being the best:</p> <ul style="list-style-type: none"> • Smaller, under-counter version of a purpose-built (lab or pharmacy grade) refrigerator-only or freezer-only unit • Household refrigerator-only or freezer-only unit • Household-style combination refrigerator-freezer with separate exterior doors and separate controls in each compartment 	

Note: The Minnesota Department of Health does not endorse or recommend any one brand of refrigerator or freezer.



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Other considerations when estimating vaccine storage space

- Only 30 percent of the space in a typical combination refrigerator-freezer is acceptable for vaccine storage.
- Vaccines should never be stored:
 - On refrigerator shelves directly beneath air vents (generally this means the top shelf)
 - In refrigerator vegetable bins or deli crispers
 - Within two to three inches of refrigerator wall surfaces
 - Outside of their original manufacturer packaging

Optimal refrigerator/freezer features

- Ability to maintain uniform temperatures, preferably with a preset temperature of 40°F (4°C) in a refrigerator and a preset temperature at 0°F (-18°C) in a freezer.
- Enough usable space to hold the year's largest inventory, such as the back-to-school rush or flu season.
- Automatic defrost cycle.
- Temperature gauge certified, calibrated, and traceable by the National Institute of Standards and Technology.

Highly desirable, but not required, refrigerator/freezer features

- Negative-pressure doors that close automatically.
- Built-in thermometers.
- Security locks.
- Wire racks (as opposed to glass).
- Visible temperature displays.

Unacceptable refrigerator/freezer features

- Visible cooling plates or open coils on the back wall of the unit.
- Dormitory-style, bar-, or restaurant-grade refrigerator/freezers. (They are unable to maintain the temperatures needed for storing vaccines.)
- A manual defrost freezer combined with a cyclic defrost refrigerator compartment and a visible cooling plate in the back of the refrigerator.

Advantages of a purpose-built refrigerator or freezer

- Maintains temperatures well; temperatures can be pre-set at the factory.
- Good temperature recovery when the unit has been opened to get vaccines.
- Nearly all the internal space in the unit can be used to store vaccines. (Usable space is much more limited in household refrigerators.)

- Allows defrosting without rises in temperature.
- Provides an internal thermometer with a display on the outside of the unit.
- Offers the option of alarm and safety features to alert you to or prevent temperature fluctuations in the cabinet.
- Includes key locks so doors can't be opened by unauthorized staff.

Costs and where to find refrigerators/freezers

- Purpose-built lab- or pharmacy-grade refrigerator-only and freezer-only units are sold by specialty distributors. Cost: \$900 to \$10,000.
- Under-counter purpose-built (lab or pharmacy grade) refrigerator-only or freezer-only units are sold by specialty distributors. Cost: \$900 and up.
- Household refrigerator-only and freezer-only units are available through major appliance retailers. Cost: \$400 to \$4,000.
- Combination household refrigerator-freezers with separate doors and controls are available through major appliance retailers. Cost: \$800 and up.

Why refrigerator/freezer specifications are changing

For years it has been acceptable to use any household refrigerator to store vaccines -- but this is changing. The main reason is that both the quantity and cost of vaccines have increased significantly in recent years. In 2008 the MnVFC program distributed over \$26 million dollars in vaccines – an increase of more than 50 percent over 2005.

Not only are there new vaccines and expanded immunization recommendations, but also more vaccines are coming from the manufacturer in pre-filled syringes that take up more space than vials. As a result, providers need more space to store vaccines than they used to. In a typical combination refrigerator-freezer, only 30 percent of the space is acceptable for vaccine storage. For example, vaccine cannot be stored in drawers, on doors, closer than three to four inches from walls, or on the top shelf, which is too cold for vaccines. So these units no longer meet the need of many clinics.

Increased vaccine usage has also meant an increase in the amount of vaccine lost due to improper storage. Now more than ever, we need to be certain that refrigerators and freezers meet all the specifications needed to protect the potency of valuable vaccine.

For more information on vaccine storage

See CDC's Vaccine Storage and Handling Toolkit at <http://www2a.cdc.gov/vaccines/ed/shtoolkit>.