**Questions/Answers: Pink Book Webinar, Storage and Handling, July 11, 2018**

**Question 1:** Is there a guideline for how high or low the top and bottom shelves should be placed in a vaccine storage unit?

**Answer 1:** CDC’s Vaccine Storage and Handling Toolkit does not specifically address shelf height in the vaccine storage unit. It does recommend placing water bottles on the top shelf and floor and in the door racks. This can prevent vaccines from being stored in areas where there is a greater risk of temperature excursions (such as the top shelf, floor, and door). CDC also recommends placing vaccines and diluents in the center of the unit, 2 to 3 inches away from walls, ceiling, floor, and door. Avoid storing vaccines and diluents in any part of the unit that may not provide stable temperatures or sufficient air flow, such as directly under cooling vents, in drawers, or in shelves on the door. The instability of temperatures and air flow in these areas may expose them to inappropriate storage temperatures. An important thing to keep in mind is that pharmaceutical-grade vaccine storage units may not have issues with temperature instability in different areas of the unit because of their design. If you have a pharmaceutical-grade vaccine storage unit, check the product manual and/or contact the manufacturer to learn more about appropriate areas for vaccine storage. For more information, please see CDC’s Vaccine Storage and Handling Toolkit at <https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf>.

**Question 2**: Please review how to determine the expiration date for a multidose vial and explain what a beyond use date (BUD) is.

**Answer 2:** Multidose vials might have a specified time frame for use once they have been entered with a needle. For example, the package insert may state that the vaccine must be discarded 28 days after it is entered, which would be the beyond use date. In that case, if the vial is entered on 06/01/2019, the BUD would be 06/29/2019. The vaccine should not be used after the BUD.

<https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf>

**Question 3:** I've found that using a z-track IM technique almost always works to decrease vaccine seepage out of the needle track once the needle is removed from the muscle.  This technique also decreases local reactions and subsequent pain at the injection site. Is this still an acceptable technique?

**Answer 3:** ACIP does not address the use of this vaccination technique in its General Best Practice Guidelines on Immunization (www.cdc.gov/mmwr/pdf/rr/rr6002.pdf). If you choose to use this method, you should still adhere to ACIP's recommendations regarding needle length and anatomical site.

**Question 4:** What is the maximum amount of vaccine per site and for infants, children, and adults? With the larger doses of Ig now recommended for travel—especially for longer trips and heavier patients—this has been a challenge.

**Answer 4:** There is no CDC-recommended maximum volume. Our training materials state a range of 0.5 cc–2 cc in the deltoid and 1–5 cc in the anterolateral thigh. In addition, you should use clinical judgment to determine what may be appropriate for the patient. A large dose of Ig can be given using multiple injections.

**Question 5:** When using a multidose vial, how do you keep track of how many doses have been administered?

**Answer 5:** Although CDC’s Vaccine Storage and Handling Toolkit does not specify how clinics should keep track of doses administered from a multidose vial, we suggest using the same log or tally sheet used to track the number of vaccine vials remaining in inventory in the storage unit. If you are using a barcode system, it may be necessary to create a new code to track the number of doses remaining in a single vial. Or you can attach a small sticker to the vial and use tally marks or cross off prenumbered doses (make sure you don’t obscure the label). Choose a system that works for your clinic’s needs and make sure everyone responsible for handling or administering vaccines is trained to use that system.