Technician Tutorial:  
Dispensing Meds in Original Containers

A large part of a pharmacy technician’s work can involve the repackaging of meds. In the community setting, most prescriptions are filled by transferring the necessary quantity of a drug from a stock package to a prescription bottle that’s dispensed to the patient. In the hospital, bulk bottles of tablets and capsules must be repackaged into unit doses for dispensing to patient care units, and IV admixtures are made by transferring the required amount of a drug from a stock bag or vial into another container (e.g., mini bag, large volume IV, etc). However, there are a number of drugs that must be KEPT in their original containers for various reasons. In fact, a number of these meds are costly and critical treatments, for conditions such as cancer, hepatitis C, or HIV. It’s very important for pharmacy technicians to know about drugs that must be kept in their original containers so patients are provided with meds that have not been, and will not be, harmed by inappropriate storage. This technician tutorial reviews meds that must be kept in their original containers.

Melvin Carnation, a 69-year-old male patient, brings in an Rx for Pradaxa 150 mg capsules, one by mouth twice daily. This is the first time he has gotten this medication. He tells you that he understands Pradaxa is a blood thinner, and it will replace the warfarin that he has been taking for several months. You know that Pradaxa comes in bottles of 60 caps each, and that it has a special requirement: it must be dispensed in its original container.

Why must some meds be dispensed in their original containers?  What are some examples?

As mentioned, there are a variety of reasons that meds must be kept in their original containers. Here are the most common ones:

Sensitivity to light and/or moisture.  It’s a fact that meds lose potency, or become less strong, over time. Exposure to light and moisture (e.g., humidity) are two of the main causes of this. Some meds lose their potency very slowly. However, some meds are extra sensitive to light and/or moisture so they lose their potency more quickly. These drugs must usually be kept in their original containers to minimize exposure to light and/or moisture, and therefore slow down the loss of potency. You can think of this as similar to meds that must be kept in the refrigerator, since exposure to higher temperatures may also hasten loss of potency.

Dabigatran (Pradaxa) is a great example of a drug that is very sensitive to moisture and must be dispensed in its original container. Dabigatran comes in bottles of 60 capsules each. These containers have a desiccant in the lid which absorbs moisture to keep it from affecting the drug. The container must be kept tightly closed and the capsules are only good for four months after the container has been opened. Dabigatran also comes in unit-dose blister packs. (Note that these might be more convenient for some people, such as those who like to place all of their meds in pillboxes/organizers or if they need a quantity less than 60. Each dose can be kept in its blister pack and placed in the pillbox/organizer until time of use.)
Another example of a drug that must be dispensed in the original container because it’s sensitive to moisture is aliskiren (Tekturna, others [U.S.]; Rasilez, others [Canada]). Zafirlukast (Accolate [U.S.]) must be dispensed in the original container to protect it from both light and moisture. Neither of these drugs must be used within a specified period of time (after the bottle is opened) like dabigatran. Sublingual nitroglycerin tablets (Nitrostat, others) must be kept in their original container to protect them from light and moisture. Just as with aliskiren and zafirlukast, once a bottle of nitroglycerin is opened, it’s good until the expiration date on the bottle as long as it’s properly stored in the original bottle.

Orally disintegrating tablets such as Zyprexa Zydis (olanzapine), Zuplenz (ondansetron-U.S. only), etc, should be kept in their individual pouches prior to administration to protect them from light and moisture. Telmisartan (Micardis, others) tablets that come in blisters must also be kept in these containers until immediately prior to administration. In fact, it’s a good rule of thumb to keep any med that comes in individual packages in those packages until just before administration.

Product labeling for drugs such as etodolac (U.S. labeling only), montelukast (Singulair, etc) tabs, mycophenolate (CellCept, etc), and verapamil advises that they must be dispensed and kept in containers that protect them from light. The original container or an amber prescription vial is adequate. (Canadian product labeling for CellCept actually instructs to store the drug in its original container.) These medications shouldn’t be moved into another container that is not light-resistant, such as some pillboxes/organizers. However, some pillboxes/organizers are light-resistant. If you know a patient is using a pillbox/organizer, refer him or her to the pharmacist so the pharmacist can double-check about the meds that he or she wants to store in it. (As mentioned previously, unit doses can be a good option for these types of meds if they need to be stored in a pillbox/organizer.)

**Adherence.** Some meds should be dispensed in the original container for other reasons. An example of a med that’s packaged to help with adherence is oral contraceptives. They’re packaged so it’s clear to the patient which pill should be taken on which day. Mixing up some oral contraceptives could lead to unwanted pregnancy, or at the very least, bothersome side effects such as irregular menstrual bleeding and menstrual cramps.

**Safety.** Some medications are to be stored in their original container for safety reasons. An example is finasteride (Proscar, etc) unit-of-use bottles in the U.S. Finasteride is teratogenic, which means it has the potential to harm an unborn baby if the mother is exposed. Dispensing finasteride in its original container helps reduce exposure to the drug by individuals who may come into contact with it, such as female pharmacists and pharmacy technicians who are dispensing it.

You enter Mr. Carnation’s Rx into the computer, and remove a bottle of Pradaxa from the shelf. You check to be sure the bottle is unopened, then place the Rx label on the bottle of Pradaxa, along with an auxiliary label to use the drug within four months of opening the bottle. You place everything together, including a Pradaxa MedGuide, for the pharmacist to check.

**Are there any non-oral meds that must be kept in their original containers?**

Interestingly, U.S. government guidelines for vaccines recommend that they be stored in the refrigerator (or freezer for some) in their original packaging (e.g., carton). This is to help make sure they stay at the appropriate temperature and are protected from light, etc. Other injectable drugs that should be stored in their carton until the time of use include doses of adalimumab (Humira), etanercept (Enbrel), and golimumab (Simponi). This is to protect the drug from light, and is usually done in the pharmacy anyway. However, these meds can be taken home by patients and self-administered, so it’s important to remind patients about proper storage.
More examples of injectable meds that must be protected from light include vials of amiodarone and both vials and infusions of nitroprusside. Once a nitroprusside infusion is mixed using the medication from the vial, the infusion itself must be covered with a light-protective sleeve, such as one made from foil or an opaque plastic. Sometimes, these come in the box with the medication. Other times, they must be kept in stock in the pharmacy.

Some inhaled meds should be stored in their original container until use. An example of this is Advair Diskus (salmeterol/fluticasone), which is only good for one month after it’s removed from its foil pouch. The foil pouch protects the device from moisture.

**How do I know if a drug must be dispensed in its original container, protected from light, etc?**

If you are unfamiliar with a drug’s storage requirements, just double-check the outside of the carton or the labeling on the ampule, vial, etc. The information you need will often be there. You can also check the package insert, under the “How Supplied/Storage and Handling” section (“Storage and Stability” and “Dosage Forms, Composition and Packaging” sections in Canada), which is usually near the end. Plus, we have a helpful chart, [Oral Meds to Keep in Original Containers](https://www.pharmacist.therapeuticresearch.com), you can reference. If you’re still unsure about proper storage, ask the pharmacist for advice. Keep in mind that there’s a possibility that storage info will vary for generic versions of a med.

For the convenience of pharmacy staff and to prevent mistakes, consider flagging drugs that must be kept in original containers with shelf tags.

In the hospital setting, where most capsules and tablets will be unit dosed as part of usual procedure, it may be extra important to look for storage information and to flag the med bottles with a special sticker or label to alert your colleagues to any special storage requirements. If there’s a beyond-use date shorter than the manufacturer’s expiration date once a container is opened, this is important to note as well. Make sure that storage requirements for all meds received by your pharmacy are checked, including non-formulary meds and any meds that a patient brings in that must be stored and/or dispensed by your pharmacy. These could easily slip through the cracks, and be handled improperly.

**How should meds that must be dispensed in original containers be handled in situations where meds must be unit dosed?**

Ideally, these meds can be ordered and stocked in blister packs from the manufacturer, as mentioned above for Pradaxa. This really circumvents the problem. If blister packs aren’t available and a bulk bottle is your only option, try contacting the manufacturer for information on assigning a beyond-use date for unit doses of the drug. The manufacturer may have information that’s not included in the product labeling that they can share. If so, ask for a copy of this info to keep on file in your pharmacy. If no additional information is available, a shortened beyond-use date, such as 24 hours, may be appropriate on the repackaged product. Check your pharmacy’s policies, and with your pharmacist, to determine if this is the case. The pharmacist may consider additional factors, such as options for packaging and how the med is being used.

Another option is that meds that must be kept in original containers may be dispensed in the original containers for inpatients as a bulk supply and not unit dosed. For example, you’ll usually send a 25-count or 100-count bottle of sublingual nitroglycerin to a patient care unit instead of packaging the tablets individually. Once again, follow your pharmacy’s policy on this, and be aware that you may need to attach a label to the bottle to provide a bar code for nurses to scan when the med is administered. And keep in mind that this may not be an optimal or practical solution in some situations.
Are there any special considerations for dispensing or labeling meds that must be kept in their original containers?

It’s important for patients to be aware of why their medication is being dispensed in the original container, and that it should not be transferred to other containers in the home such as pillboxes/organizers.

If a drug has a particular use-by date (a date after which remaining drug must be discarded) like Pradaxa, it’s important for the patient to know. This can be accomplished by both telling the patient and by writing the information on an auxiliary label or on the bottle. Think of this as similar to dispensing reconstituted antibiotic suspensions that are only good for a certain period of time.

When you label a medication that’s being dispensed in the original container, be sure to avoid covering up the NDC or DIN number, the expiration date, and the lot number, if possible. The pharmacist needs to see this information when he or she is checking the prescription. Also, if the med package comes inside a box, ask the pharmacist if the med package should be labeled, since the patient might throw away the box.

Depending on the days’ supply being dispensed, you may need to help the patient remember to use up the entire supply in one bottle before opening a new bottle. For example, a 90-day supply of Pradaxa would be three bottles. You could number the bottles for the patient, #1 of 3, #2 of 3, and #3 of 3.

When the pharmacist hands the Rx to Mr. Carnation, he reinforces to Mr. Carnation that he should leave the Pradaxa capsules in the original container. Any drug left over after four months should be discarded. Mr. Carnation says that’s no problem. He puts his vitamins and the few other Rx meds he takes in a pill organizer, but he will keep the Pradaxa separate, in the bottle that’s being dispensed to him.

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“Cheat Sheet” for Dispensing Meds in Original Containers

Why must some meds be dispensed in their original containers? What are some examples?
Some reasons that meds must be kept in their original container are to:
• protect them from light and/or moisture
  o Examples: dabigatran (Pradaxa), nitroglycerin sublingual tablets, zafirlukast (Accolate, etc)
• improve adherence
  o Examples: oral contraceptives
• protect pharmacy staff, caregivers, etc.
  o Examples: finasteride (Proscar, etc)

Are there any non-oral meds that must be kept in their original containers?
Non-oral meds that should be stored in their original containers include:
• adalimumab (Humira)
• etanercept (Enbrel)
• nitroprusside (Nitropress, etc)
• some inhaled meds
• vaccines

How do I know if a drug must be dispensed in its original container, protected from light, etc?
To find out about a drug’s storage requirements, check:
• labeling on the outside of the package.
• the med’s package insert, specifically, the “How Supplied/Storage and Handling” section (“Storage and Stability” and “Dosage Forms, Composition and Packaging” sections [Canada]).
• any special labels or shelf tags used in your pharmacy to indicate that a med should be kept in its original container.
• with your pharmacist.

In settings where meds must be unit dosed, what should be done for those that must be dispensed in original containers?
As a first step, check to see if the med is available in blister packs from the manufacturer. If it’s not:
• contact the manufacturer to see if they can provide information on unit dosing the med, such as an appropriate beyond-use date.
• check your pharmacy’s policies on unit dosing original container meds.
• ask your pharmacist how to proceed.

Are there any special considerations for dispensing or labeling meds that must be kept in their original containers?
• Ensure the patient knows not to move the meds from the original container into another container such as a pill box.
• If an original container med has a particular use-by date once a container is opened, inform the patient by writing the info on an auxiliary label or on the bottle.
• Avoid covering information such as the NDC or DIN on the original container with any labeling.

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