

# Packaging Medications for the Long-Term Care Setting

**B**y packaging medications, provider pharmacies pass on numerous benefits to their client organizations. Medication packaging systems can ultimately lead to improved medication identification, security, ease of dispensing, and ease of administration in long-term care facilities. Furthermore, in some states, it is possible for care facilities to return unused packaged medications for credit, provided those doses have remained in their own sealed containers and under nurse control. So packaging can lead to improvements in care and decreased costs associated with medications.

## Packaging Choices

There are three common systems available for packaging medications for the long-term care setting. The first involves packaging all of a patient's medications for a particular med pass in one pouch or envelope, labeled with drug information and directions for each medication. The second system produces unit dose packages. Each sealed package contains one dose of a patient's medication and is labeled with the name and strength of the drug, the expiration date, and the lot number. Typically, each medication is stored in its own small white box in a medication cart or in-room cabinet prior to administration. The third and probably most common packaging system produces punch cards holding 30 to 90 doses. Medication punch cards are typically 6 by 9 inches in size and are labeled with the drug name, strength, expiration date, and lot number. A prescription label can also be affixed to the card, identifying the patient and detailing any specific administration



Photos courtesy of AutoMed Technologies, Inc.

Multi-dose packages offer ease of administration, as nurses have only one package to open per patient during each med pass.

instructions. Doses are then stored in a particular sequence in a medication cart, from which a nurse will administer doses in that order.

Each system has its own specific advantages. Multi-dose pouches or envelopes are very easy and efficient to administer; nurses just have to open one pouch, put the meds in a soufflé cup, and administer them. The disadvantage of this system is the difficulty that arises if one of the medications has been discontinued. The nurse then has to identify and remove that medication from the envelope before administering the rest of the patient's doses. In this scenario, the accuracy of the med pass may be compromised.

While unit dose packages eliminate the problem detailed above, they do add time to the med pass, as each package has to be opened individually. From a nurse's standpoint, that can be frustrating. Manufacturer-packaged unit doses are known for being particularly difficult to open. However, because of the strict cGMPs manufacturers must follow in their packaging, manufacturer-packaged doses can have longer shelf lives than doses packaged in the pharmacy. Furthermore, if your state allows it, facilities can return unused, unopened unit dose medications for credit if they have remained under nurse control, thus providing an obvious financial benefit.

Punch cards offer a couple of distinct advantages. First, their labeling allows for easy identification of the medication, and nurses can quickly visually confirm that all of the tablets or capsules contained in the card are the same, adding a layer of patient safety. Nurses also find punch card doses easy to administer; they simply push the dose through the card and into the soufflé cup. In my experience, punch cards can lead to a 10% to 15% reduction in med pass time over unit dose boxes.

## Automated Packaging Systems

There are automated systems for producing each of these types of packages. However, while there are machines that can produce unit dose and multi-dose packages, there is no true automated system for packaging those strips in their white boxes, leaving that to be done by hand.

As with any technology purchase, when evaluating automated systems for medication packaging, you want to ensure the accuracy of the machine under consideration. Some of the vendor systems available today offer bar coded verification of their packaging processes, and I recommend purchasing a system with such a fea-



Punch cards enable nurses to quickly identify and administer patient medications.

Each system has its own  
specific advantages.



In addition to automated systems, manual systems for packaging medications in punch cards, such as this one from Medi-Dose, are also available.

ture, as it can dramatically reduce errors in packaging and labeling. The speed with which the machine is able to package medications, relative to the volume of packaging you need to perform, is another important consideration. If you are looking for a machine to produce multi-dose packages, you will also want to consider the device's line item capacity. These machines typically hold between 450 and 500 different line items. If you are preparing packages for a particular patient, and one particular medication is not available amongst the machine's line items, your staff will have to add that tablet or capsule to those pouches by hand. In addition to the time and labor associated with performing an additional manual process, this practice can also open the door for error.

Packaging Policies and Procedures

It is specifically the responsibility of the pharmacy to provide its client facilities with the correct medications in the correct packaging. The nurses in charge of administering patient medications must receive packaging that is accurate and easy to read, in order to ensure that their patients receive the correct drugs.

To verify the accuracy of your packages or punch cards, several quality control and quality assurance processes should be built into your packaging procedures. Steps should be taken to confirm that your packaging equipment is labeling each dose or card with the proper patient and drug information. Bar codes can aid in this process. By scanning the bar code on a manufacturer bulk bottle, your automated packaging system should be able to automatically populate the print fields on your unit dose packages or punch cards with accurate drug information. High-volume unit dose and multi-dose packagers also offer certain automated safeguards via bar coding. For instance, by scanning both the bulk bottle's bar code and the machine's bar coded medication cassettes, you can verify that you are accurately stocking the machine prior to any packaging activities.

It is also helpful to document all of your packaging processes, and track the activities of the individual staff members involved in each packaging run.

A supervising pharmacist should verify your packages and punch cards before they enter inventory.

Pharmaceutical Inventory Management

If you use a punch card system, you should consider performing large packaging runs of inexpensive, high-volume line items, like aspirin, in order to generate on-hand, packaged inventory. This practice is particularly cost-effective when you consider the labor involved with each packaging run. Why not set up the system to package that kind of fast-moving inventory once, rather than multiple times, per week? For expensive medications, consider packaging only seven days' worth inventory at a time. This financially sound practice will keep your on-hand inventory costs to a minimum. In order to properly anticipate your inventory needs, you should run usage reports from your pharmacy information system. Determine how many prescriptions you are typically filling to ensure that you have the correct amount of inventory on hand and packaged for dispensing. Although some amount of on-demand packaging will always be necessary, a well-thought out inventory strategy can diminish your labor and inventory wastage costs and improve your overall workflow.



Some states allow unused unit dose packaged medications to be returned for credit, if they have remained unopened and under nurse control.

Conclusion

It is a tremendous financial and service advantage for your long-term care pharmacy to have a packaging system in place. Take care to properly evaluate any systems under consideration for purchase to ensure that you make good use of the efficiencies it can provide. ■

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SOURCES FOR MEDICATION PACKAGING SYSTEMS:		
Vendor	Reader Service Number	Website
AmerisourceBergen Technology Group	60	www.automed.com
McKesson	81	www.mckesson.com
Medical Packaging Inc.	90	www.medpak.com
Medi-Dose, Inc.	66	www.medi-dose.com
MTS Medication Technologies	77	www.mts-mt.com
Rx Systems, Inc.	83	www.rxsystems.com
Talyst	44	www.talyst.com