

Anticipatory Compounding

**An Important Part of Pharmacy Practice:
What, When and Why**



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Introduction

Anticipatory compounding, or preparing compounded medications before the actual receipt of a prescription or practitioner’s order, is an important component of pharmacy practice. It allows compounding pharmacies with a history of filling certain prescriptions to make up a larger batch and to make sure that medications will be ready when they are needed. It reduces the cost of compounded medications as economies of scale can be realized with larger batches and less waste of chemicals, dilutions, fillers, and other associated products. It also leads to more accuracy and uniformity in the finished medications as larger batches decrease the variation that will always exist from preparing multiple, smaller batches.

Compounding in anticipation is even more important in the preparation of sterile medications (i.e., injectibles and eye drops). Because a guarantee of sterility is essential, sterile compounds should be prepared far enough in advance to allow for the receipt of results from testing that is often mandated by regulatory authorities. For example, USP Chapter <797> for sterile compounding requires testing for sterility and endotoxins if a batch size consists of 25 or more units. For many of these sterile medications, test results can take up to 14 days to complete. So quality and safety is greatly enhanced if sterile compounded is completed far enough in advance so that the finished medications can be tested without delaying their availability to patients and practitioners who often have medical needs that are time sensitive.

Anticipatory compounding is only used for those medications that are in sufficient demand to justify their compounding prior to receipt of a prescription. If a unique or unexpected prescription is received by a pharmacy, it is compounded “on-demand” and a patient or practitioner may have to wait to receive the required medication. But it is common for many expected orders to have same formula, and these can be compounded in advance to benefit both the patient and the pharmacy.

Misconceptions About Anticipatory Compounding

There is a serious misconception by some policy makers that pharmacies can compound without the use of anticipatory compounding and still meet patient and provider needs. This misconception is especially serious with the compounding of sterile medications since legislation pending in the U.S. Senate has severe penalties that can apply if a pharmacy compounds in anticipation of a prescription for sterile medications and dispenses them across state lines. Waiting to have a prescription or practitioner's order in hand for sterile medications would delay the availability of medications that are often immediately needed. It would also greatly increase waste and the cost of these medications to consumers, and could unnecessarily compromise patient safety if testing is not completed before medications are dispensed. For all practical purposes, banning the use of anticipatory compounding for sterile medications is not feasible unless patient and provider needs and cost considerations are ignored.

Advantages of Anticipatory Compounding

Patient and provider convenience

Delays in receiving medications are greatly reduced or eliminated.

Lower cost of compounded medications

Economies of scales can be achieved, and there is greater efficiency and less waste of chemicals and other components of the finished medications. The cost of other procedures such as required cleaning is substantially reduced.

Increased quality control and safety

Larger batches lead to more uniformity and fewer potential errors, and testing can be done in a timely manner before the actual medication is dispensed.

Improved chemical and supply management

The fewer entries into a stock container of a chemical, the better. This allows for greater control of headspace moisture to enhance stability, and also provides for a fewer number of opportunities for contamination to occur.

It is very important for a pharmacy to properly manage compounding a medication in anticipation of a prescription or practitioner's order. If more medication is compounded than is dispensed in consideration of the beyond-use date of the batch, it must be destroyed. A pharmacist cannot dispense a batch with a beyond-use date shorter than the projected completion of the use of the preparation. Consequently, anticipatory compounding is done very carefully and conservatively.