CHAPTER 7

Prescription Processing

Objectives

UPON COMPLETING THIS CHAPTER, YOU SHOULD BE ABLE TO DO THE FOLLOWING:

- Describe the responsibilities of a technician filling prescriptions within a community setting.
- List the necessary information required for prescriptions and labels.
- Demonstrate the ability to prioritize the filling of prescriptions.
- Differentiate filling methods between controlled substances and non–controlled substances.
- Describe laws pertaining to the technician’s responsibilities when filling prescriptions.
- List the 10 steps of carefully filling a medication order.
- Differentiate between inpatient and outpatient information requirements.
- List the types of automated machines used in filling prescriptions.
- Explain the steps of reducing medication errors.
- List the 5 rights of a patient in regard to medication safety.
**Introduction**

Filling a prescription is one of the most important and commonly performed duties of a pharmacy technician, regardless of the setting. The act of transcribing physicians' writing into lay terms sometimes can be frustrating, if not impossible. However, with time and experience, a good technician can determine easily whether he or she can process a prescription quickly or if assistance from the pharmacist is needed. Often the pharmacist cannot decipher the physician's writing either. In this case, the pharmacist is responsible for contacting the physician and asking for clarification of the prescription, also known as the *script*. Whether a technician is working in an institutional pharmacy, community pharmacy, or closed door pharmacy, the process of reading and documenting a physician's orders is similar.

This chapter first explores the various methods by which a prescription can arrive in a pharmacy and the fundamentals of reading a prescription. Skills required of technicians within a **community pharmacy** are more comprehensively covered in this chapter. Community pharmacies are retail pharmacies such as CVS, Walgreens, and those located in supermarkets. There are more retail pharmacies than any other type of pharmacy. **Closed door pharmacies**
provide medications to institutions and long-term care facilities and/or to patients at home via mail service. They typically process a prescription similar to a retail pharmacy although they may package prescriptions differently for each type of setting. More information on closed door pharmacies can be found in Chapter 3. An overview of institutional pharmacy prescription processing is covered more thoroughly in Chapter 10. Institutional pharmacies are located inside facilities such as hospitals, prisons, and other institutions. Typically medications are filled for 24 hours. This chapter explores understanding and translating, filling, and filing a prescription; in addition, methods of resolving discrepancies in a script are also discussed. This chapter also describes the most common types of medication errors and suggests ways the technician can avoid some of the typical pitfalls. As with any skill, practice makes perfect. This chapter also provides exercises to practice competencies of common prescription discrepancies. For more information on medication errors see Chapter 14.

**Processing a Prescription: A Step-by-Step Approach**

Five basic steps are required for filling a prescription within a community pharmacy. Four of these steps relate directly to the technician; the fifth pertains directly to the pharmacist. Although these steps may seem simple, they require complete focus and concentration. Within each step are several important points to remember that have been outlined in this chapter. The five steps include the following:

1. Receiving the prescription  
2. Translating the prescription  
3. Entering information into the computer system  
4. Filling the prescription  
5. Providing patient consultation

**RECEIVING THE PRESCRIPTION**

A prescription can arrive in a pharmacy by various methods. A prescription can be in the form of a written order that is on a conventional prescription pad listing the physician’s information (Figure 7-1). A prescription can be carried into the pharmacy or be faxed from the physician’s office to the pharmacy. Computer-generated prescriptions, with electronic transmission online or via mobile devices, are becoming common as well. Box 7-1 outlines the various methods used to transmit prescriptions to the pharmacy.

**Prescription Information**

**Community Pharmacy Setting.** If the order is written by a physician or other authorized person, it usually is delivered to the pharmacy by the patient. Therefore the person at the “take-in” counter handles the prescription initially. This is usually the clerk or technician. This person must ensure that the correct information is listed on the prescription. Box 7-2 lists the typical patient information needed to fill a prescription in the community setting. Additional information such as address, phone number, and birth date (if not provided by the prescriber) may need to be provided by the patient so that the computer system can be updated. The pharmacist normally obtains information on any over-the-counter (OTC) and herbal medications the patient may be using. This is important information to obtain because of the possibility of drug interactions. Additional information, such as allergies and current medical conditions, is also entered into the database for future reference.
In large retail companies the intake technician may scan the prescription and the patient’s insurance card. If the coverage is Medicare, then Medicare Part A and B cards should be scanned separately from the Part D card and patient identification. This information is then available to be displayed on the monitor in case there is a billing error or question on identity. If the patient is a member of a health maintenance organization (HMO) or other managed care organization (MCO), the patient must provide his or her medical record number, unless it is already on file from a previous prescription. Some plans do not offer prescription coverage. For a prescriber, the Drug Enforcement Administration (DEA) number is required if a controlled drug is being dispensed. In addition, a controlled drug prescription must be written in indelible ink. A federal law implemented in 2008 required that all written prescriptions for covered outpatient drugs that are financed by Medicaid be written on tamper-resistant prescriptions, irrespective of whether the script is for controlled substances. Several states are also instituting such requirements for all prescriptions, except those that are transmitted electronically or within institutional settings. See Chapter 2 for more information on verification of DEA numbers.

**Institutional Setting.** In a hospital or inpatient setting, prescriptions are referred to as medication orders, and the information required on these orders differs from that required for outpatient prescriptions. If the physician or prescriber is employed by or considered approved staff by the hospital, the license number and DEA number are on file. Therefore it is not necessary for the prescriber to provide this information on the medication order or controlled drug order for use within the institution. Box 7-3 shows the information that is required for institutional prescriptions.

Most medications are provided from the pharmacy to fill the prescriber’s orders for a 24-hour period. For example, for a multivitamin given as 1 tablet orally once daily, the pharmacy will load 1 multivitamin into the patient’s
BOX 7-1 COMMONLY FOLLOWED RULES FOR TAKING PRESCRIPTIONS

**Call-in**
Calling in a prescription can be done by a physician, nurse, or physician’s assistant (as designated by the physician). When called in, the pharmacist transcribes the verbal order onto a blank prescription pad. Technicians should be aware of the specific rules of their state for taking verbal prescriptions. Taking a prescription over the phone must be done only by a registered pharmacist, or (depending upon the state) by a pharmacist intern or technician under the direct supervision of the pharmacist.

**Fax**
Faxed prescriptions are mostly used by hospitals, and are becoming more common in community pharmacies. Schedule II medication prescriptions, if faxed, must be followed by a written prescription received at the pharmacy within 7 days (per federal law). Faxed copies of prescriptions can be sent by a ward clerk in the hospital or from a physician’s office. A faxed prescription must be on the physician’s office letterhead to prevent fraudulent prescriptions. This letterhead often includes the names and license numbers of all prescribing physicians in the office as well as the address, phone number, and fax number.

**Walk-in**
Most prescriptions in a community pharmacy are taken into a pharmacy by the patient, by a relative, or perhaps by a friend. In hospitals, discharge orders usually are sent to the inpatient pharmacy via a pneumatic tube system or are hand-delivered by staff. In an outpatient dispensing pharmacy of a hospital, prescriptions are handled in the same manner as prescriptions received in a community pharmacy (see Chapter 10).

**E-Prescribing**
Sending prescriptions electronically is becoming more popular because of the increasing focus on error prevention. Physicians can enter their prescribing information either from a computer or (in some cases) from handheld electronic devices. The electronic prescription is transmitted directly to the pharmacy department where a pharmacist can review the order before processing. A list of pharmacies that accept E-prescriptions can be found online at www.learnaboutEprescriptions.com. However, E-prescribing at this time does not allow controlled drugs to be prescribed because of the current restrictions of federal law. These restrictions may change in time; the Drug Enforcement Administration (DEA) has been working with the U.S. Congress since 2007 to reform controlled substance regulations to allow for safe and secure E-prescription of controlled substances.

*The following are some benefits of using E-prescribing:*
- Saves money
- Incentives given by insurance companies
- Free prescribing software for prescribers offered as incentive
- Saves time
- Prescriber can send authorization, including prior authorizations, from any place or at any time
- More information available to prescriber on generic alternatives, formulary status, interactions during the E-prescribing process, rather than after the prescription is given to the pharmacy
- Refill requests approved faster
- Drug errors reduced
- Clear instructions and the lack of personal handwriting make it easier for pharmacy to interpret

*The following are some barriers for E-prescribing:*
- Use of proper software by pharmacy to ensure patient privacy
- Must adhere to all state and federal standards
- Must meet all requirements of HIPAA standards
### Box 7-2 Required Patient Information in a Community Setting

**Patient Information:**
- Name
- Phone number and address
- Insurance information, if applicable
- Date of birth
- Picture ID for controlled substances (per pharmacy protocol)
- Allergies
- Other drugs taken (This information must be provided by the patient, and would include over-the-counter drugs, dietary supplements, and medications filled at other pharmacies.)
- Medical conditions (e.g., diabetes, hypertension, asthma). The entry of medical condition or other personal health data is often considered an optional data entry item; the technician should refer to applicable state laws and employer policy. The information is often helpful, if the patient provides it, because it allows for appropriate screening of drug-condition precautions.
- HIPAA compliance handout/signature

**Provider’s Information:**
- Name
- Phone number and address
- Provider’s license number (This may be required by state law.)
- Provider’s Drug Enforcement Administration number, if applicable

**Prescription Information:**
- Name of medication
- Strength
- Dosage form
- Route of administration
- Quantity
- Sig (directions for taking or using)
- Refill information
- Provider’s signature
- Date written
- Dispense As Written (DAW): prescriber desires brand name drug rather than generic version of drug

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**Tech Note!**

Patients may be obtaining medications from other pharmacy locations or may be receiving treatment elsewhere for other conditions. Because of this, it is important to ask patients about their current conditions and all medications they are taking. In this way the pharmacist can counsel the patient on any interactions that may occur between the new medications and other concurrent medications.

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medication tray every 24 hours and will continue this practice until the physician changes or discontinues the order. For injectable or intravenous medications, the pharmacy will also fill limited quantities and provide them to the patient’s care area, usually for the next 24 hours. Exceptions to the daily fill practice are orders for antibiotics, which usually have an automatic stop date after a duration of treatment for the patient’s condition, unless the prescriber specifies different orders.

**Translation of an Order**

When reading an order that is difficult to decipher, make sure you look at the entire order. For instance, what is the name of the clinic or office from which the order originated? Can you decipher the strength or dose? What is the route of administration? How often is the medication being ordered? What is the dosage form? Are there refills? If it is still difficult to decipher the name of the medication but you determine the strength is 0.125 mg and the medication is to be taken daily, this information limits the types of possible medications and the name of the medication may become apparent. In other cases, there will be too
many possibilities that fit the information that is available; it is best to request clarification of the order to avoid a medication error. There are many look-alike, sound-alike medications with similar dosing. Ultimately, if you are in doubt, ask another person such as the pharmacist.

**When to Ask for Help**

When a job relies on reading another person’s handwriting and the handwriting is poor, it is common to need assistance in interpreting the writing. However, each person filling prescriptions is under intense pressure to fill them quickly, and this can lead to “guessing” at an order and then filling it. The following example is to help you feel comfortable in asking for help.

**ENTERING THE INFORMATION INTO THE DATABASE**

**Community Setting**

The way in which prescriptions enter the pharmacy will determine the processing of the medication. If the order is received by telephone, the pharmacist must translate the verbal order into a written order by using a prescription pad, and then it can be processed. If a hard copy is received, the order is interpreted and entered into the computer. (Figure 7-2). In a community pharmacy setting, the technician usually enters the prescription orders. The computerized label is checked against the prescription after it is filled. Two labels are always discharged from the printer; one is placed on the vial for dispensing, and the

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**BOX 7-3 REQUIRED PATIENT INFORMATION IN AN INSTITUTIONAL SETTING**

- **Patient Information:**
  - Patient’s name
  - Medical record number
  - Room number
  - Allergies
  - Height
  - Weight (In many patients, such as pediatric, geriatric, and oncology patients, the height and weight of the patient are needed for dosage calculations.)
  - Age or date of birth
  - Laboratory parameters (important for drug monitoring or dose calculations)
  - Diagnosis or suspected diagnosis

- **Prescriber Information:**
  - Covering physician’s name
  - Primary physician’s name (may be different than covering physician)

- **Prescription Order Information:**
  - Name of medication
  - Strength
  - Route of administration
  - Dosage form
  - Sig (including frequency of administration and duration of treatment in some cases)
  - Physician’s signature
  - Date and time order written or when order is to begin

- **Other Important Information, Usually Available from Medical Chart or Nursing Staff:**
  - Scheduled procedures
  - Prognosis

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**Tech Note!**

When you ask someone to decipher a drug name or instruction, do not share your interpretation with the person. This inadvertently can make that person see the prescription the same way you are seeing it. Simply ask, “What does this look like to you?” If the answer matches yours, then you have an unbiased opinion. However, if you are not sure, ask the pharmacist to contact the physician to confirm the prescription.

**Tech Note!**

More and more hospitals are using preprinted prescription order sets for certain disease conditions. The physician merely needs to indicate the correct drug, strength, dosage form and amount, and other orders for the individual patient, and then sign the script. The sets help ensure that quality management standards are met, and the preprinted format limits errors in order interpretation. Also, many physician’s offices are E-prescribing prescriptions to the pharmacy from computers located in the exam room or from handheld devices. As physicians begin to move into the increasingly paperless world of prescriptions, the hope is that illegible handwriting will soon be a thing of the past.
other is positioned on the back of the original prescription. Additional portions of the script label can be placed on a clipboard that is signed by the patient during medication pickup. This clipboard signature can be used both for reimbursement and for consultation documentation. The pharmacist and technician (in many states) must initial both copies. If the pharmacy uses electronic prescription pickup, the patient will sign an electronic signature device. Most pharmacies today copy (scan) prescriptions to the computer for verification. If a change must be made, the pharmacist can access the terminal easily and make the change to the order. At the time of consultation, the pharmacist has an additional opportunity to determine other medications the patient may be taking.

**Institutional Setting**

In a hospital, prescription data can be entered into the computer by either a pharmacist or a technician. Depending on the protocol for a hospital, the pharmacist may enter medication orders into the computer and the technician fills the order. In a hospital, there are multiple orders sent upon the admission of a patient and throughout the patient’s hospital stay. Because all orders have to be verified by a pharmacist, it saves time if the pharmacist inputs the order and the technician fills the order. Computer systems allow the technician to enter medications and flag them for the pharmacist to check. This must be done before a label is created. Therefore, if the pharmacist enters the order, he or she only has to check the technician’s work (pulled medications) once rather than twice—after the technician enters the order and after the technician fills it. In addition, most computers have an integrated system that alerts the person entering prescriptions of a serious drug interaction or other potential problems based on the patient’s specific health information, including diagnosis and reported laboratory tests. A technician cannot handle interaction problems; a pharmacist must initiate a phone call to the physician or charge nurse to obtain an order change if necessary.
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FILLING THE PRESCRIPTION IN A COMMUNITY SETTING

After the prescription label is prepared, it is matched with the original order and sent to the counter for filling (Figure 7-3). Filling may occur using an automated dispensing system. Again, the technician (in most settings) receives the order. From the beginning, it is important that the technician pay close attention to the prescription he or she is filling because this is where many mistakes can be avoided. Following these 10 important steps may prevent the technician from making a grievous error:

1. Verify that all necessary information is on the prescription.
2. Pull the appropriate medication from the shelf.
3. Measure or count the necessary amount of the medication. If counted by the automated system (e.g., Baker Cells), then recount, especially controlled substances.*
4. Fill the vial with the medication, taking care not to touch the medication.
5. Ensure that the lid is the appropriate type (e.g., childproof) and is affixed properly onto the vial.
6. Apply the labels onto the vial and back of the prescription.
7. Place the technician's initials on the bottom right-hand side of all labels printed.
8. Apply any necessary auxiliary labels to the vial.
9. Place the medication and stock bottle on top of the original prescription.
10. Pass the medication onto the pharmacist for final inspection. Usually the pharmacist on duty logs on the computer with his or her initials, which will appear on the prescription label.

1. Verifying the Prescription

Although prescribers use many different types of prescription pads, the information is basically the same. Ensuring that all parts of the prescription have been

*If available, check the medication item against the verification information (e.g., image, imprint, shape); in the pharmacy system; many large retail pharmacies have this information available and require this step in their protocols for prescription filling.
filled out is the first step in processing the prescription. When the label is passed along with the original prescription, it must be checked many times before it ever reaches the patient. The technician should hold the original prescription next to the label and check for any apparent errors or discrepancies. Look at the name of the drug, strength or dose, dosage form, route of administration, amount, and the sig (directions). Make sure all information matches. For direction abbreviations, see Chapter 5.

2. Pulling the Correct Medication
You will leave the counter to get the medication from the shelf (Figure 7-4). When doing this, make sure that you take the label with you for two reasons:

1. You do not forget the name of the medication for which you are looking (which is a time-saving action).
2. Once the bottle of medication is found, compare the label information to the bottle, checking the name, strength, dosage form, and National Drug Code.

3 and 4. Counting and Filling the Medication
After the technician locates the medication, removes it from the shelf, and returns to the counter, the prescription is filled. Again, you should check your label and prescription against the medication bottle for accuracy. If the order is for a bottle of 100, check to make sure that the manufacturer’s package size matches your order. For example, many times bottles hold different amounts. Although there are various ways to count medications, many pharmacies still use counting trays (count in multiples of 5), and then the medication is poured into the vial (Figure 7-5). A device that uses a beam of light is also used to count medications. As the light is broken, the digital counter adds another tablet or capsule on the monitor. Digital counters also can weigh the tablets or capsules as you pour them into the vial. The medication label is scanned into the scale’s electronic system; the machine can then calibrate the amount of tablets or capsules based on their weight. An example of this type of digital counter is the Torbal DRX-300. Larger semiautomated or automated machines such as the Baker Cell system are used to verify and fill orders in fast-paced pharmacies. Dispensing systems are discussed later in this chapter.
5. Prescription Lids

Once the vial is filled with the medication, the appropriate lid is applied to the vial. As the average human life expectancy increases, there is a growing segment of the population that is older than 70 years. Two of the problems that accompany aging are decreasing dexterity and strength. As most of us have experienced, there are safety lids that even Godzilla cannot remove! Not surprisingly, many older patients do not wish to have childproof safety lids on their medication. By law, the pharmacy must use safety lids in all cases except for a selected few. These cases are outlined in Table 7-1.

If the patient or his or her physician has requested no childproof caps, then the cap can be replaced with a snap-on lid. Many pharmacies (depending on regulation) require the patient to sign the back of the prescription or a release form requesting a non-childproof cap. This information is then listed on the patient information in the computer for future reference.

6. Applying the Label

When labeling a bottle, you must be professional and always provide a quality job. Do not place a torn label or place the label crookedly on a medication bottle.

**TABLE 7-1 Exceptions for Safety Lids**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dispensed Without Safety Lid</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitroglycerin</td>
<td>Never has a safety lid</td>
<td>For emergencies</td>
</tr>
<tr>
<td>Isosorbide SL (sublingual)</td>
<td>May be dispensed without a safety lid</td>
<td>For emergencies</td>
</tr>
<tr>
<td>All other medications</td>
<td>Doctor’s request documented on prescription &lt;br&gt;or patient’s request documented in computer &lt;br&gt;or in hard copy</td>
<td>Any conditions</td>
</tr>
</tbody>
</table>

*Refer to the Poison Control Act of 1970 for all exceptions.*
If the label rips, print a new one. No one wants to believe that the prescription was filled in a rush, but rather with care and concern. When filling a prescription for a full bottle, such as cough syrup, you can place the label over the label of the existing bottle, making sure the lot number and expiration date are not covered. If the medication has to be counted or measured, pour the medication into an appropriate-sized bottle.

 Sometimes labels must be reduced in size because of lengthy directions. For example, a tapering dose of prednisone is a typical challenge, but it is possible to fit these labels onto a vial or dose-pack even if you must use a vial that is larger than normal to accommodate the label. Carefully cut the label so that it will not be apparent to the patient. Also, the label must not cover any important print. In addition, auxiliary labels, when required, must be placed onto the bottle so that the patient can read the instructions easily. Many computer systems have a labeling system that allows the following information to be printed on one sheet:

- The prescription label
- A duplicate copy to be placed on the original hard copy
- Billing information
- Auxiliary labels

Once a prescription is entered into the computer system, the instructions and necessary information are printed on labels. Most labels contain preprinted information that is required by law, which consists of the following:

- Name, address, and phone number of pharmacy
- A prescription number, given automatically by the computer
- Patient name
- Drug name, strength or dose, and dosage form
- Manufacturer’s name
- Instructions for use
- Date filled
- Refill information
- Prescriber
- Expiration date
- May also contain name or initials of pharmacist

7. Technician’s Initials
All orders filled by a technician should be initialed by the technician as the prescriptions are filled, per state law. This is important for several reasons. The pharmacist who will give the final approval now knows that the prescription is filled. If the pharmacist has any questions, he or she knows whom to ask. Finally, if there is an error, the technician can be notified and learn from that error. In addition, the pharmacist must always sign off and approve the prescription or refill after completion. Some computer systems have the pharmacist’s initials printed on the label, which is acceptable to most state boards of pharmacy.

8. Auxiliary Labels
All necessary auxiliary labels must adhere to the vial in a neat manner (Figure 7-6). These labels are normally printed along with the label, aiding the technician. However, it is still important to know what medications need special auxiliary labels because not all pharmacies have this ability. If many auxiliary labels are being printed, it is necessary to choose the most important ones that can fit easily on the medication bottle. Care should be taken not to conceal any instructions, lot number, or expiration date.
To realize which medications require an auxiliary label, the technician must know the classification of the drug, interactions, and side effects. Remembering a few common rules will help with the most general auxiliary labels (Table 7-2). For the most part, it takes time and experience to learn which auxiliary labels are important for various medications. However, it is ultimately up to the pharmacist to choose and approve the labels to place on the prescription bottle. Be sure to read auxiliary labels before adhering them to the bottle, because many different instructions are colored the same and may appear similar.

### 9 and 10. Pharmacist’s Final Inspection

The last step in filling prescriptions is placing the filled vial, along with the medication container taken from the shelf, on top of the original prescription and passing it to the pharmacist for final inspection. The technician should give the order one final inspection to ensure that the patient’s name on the prescription matches the label and that all other information is correct.
Only then should you pass the medication to the pharmacist and begin filling the next order.

Another important aspect of filling a prescription is to remember not to fill more than one prescription at a time; this is an invitation for error. You can pull several orders and give each a double-check for accuracy, but it is important to clearly separate them from the prescription you are currently filling.

If a new stock bottle is opened to fill an order, mark it across the front with an X (in pen) to alert fellow employees that it is not a full bottle. Do not cover the drug name, strength, National Drug Code, or expiration date with the mark. When the bottle is returned to stock, the next person pulling the bottle will know it is a partial bottle. If a full bottle is needed, he or she will choose an unmarked one. The overall time that a prescription is in the hands of the pharmacy technician is not long, which is why it is so important to make each moment count when trying to fill a prescription flawlessly.

**Community Dispensing Systems**

Many chain pharmacies are using automated dispensing systems (ADS) for three primary reasons: to reduce errors, to increase productivity, and to manage inventory (Box 7-4). Because of new laws that require pharmacies to decrease medication errors, pharmacies are converting rapidly to these types of systems.

Automated systems can now visually identify all the information on a label through a bar code located on the side of the prescription label. They also show the filler an image of the medication inside the container so it can be verified at the time of filling. Only after the authentication of the medication identification does the dispenser release the proper medication into the vial. When the dispenser needs to be filled, the technician will pull more medication and again the medication bottle will need to be scanned to ensure the correct drug has been selected; then the technician can fill the dispenser. As medications are added and used, the automated system keeps track of the inventory. New stock can be ordered in a timely manner so that the pharmacy will always have some of the medication readily available.

**FILLING ORDERS IN AN INSTITUTIONAL SETTING**

Institutional pharmacies do not follow the same steps as outpatient pharmacies for filling medication orders. Orders in this type of setting are sent via hospital order forms or done electronically, and involve a much wider range of medications. In addition, medication is provided for 24-hour periods. For complete
information on steps involved in filling institutional orders, see Chapter 10, Hospital Pharmacy.

**Computer Dispensing Systems**

Another type of prescription filler besides the traditional pharmacist or technician is the emerging automated computer system. New and improved versions become available every year. Pharmacy personnel must become comfortable with manipulating these devices because they are here to stay. Several versions of dispensing systems are available: those made for filling outpatient prescriptions and those for hospitals, nursing care facilities, and large mail-order companies. Because of the many differences between types of pharmacy settings and because each pharmacy has different requirements, computer systems must be individualized according to the needs of the pharmacy. Therefore most manufacturers of automated systems offer various components to fit the specific needs of each pharmacy.

**Inpatient Dispensing Systems**

Most hospitals use some type of computerized dispensing system because it is important that medication be continually available for acute needs. Although many inpatient pharmacies are open 24 hours a day, 7 days a week, staffing is limited throughout the night, and computer dispensing systems can help reduce staffing needs. Medical personnel such as physicians or nurses should be able to access approved stock medications. Another major use of automation in hospital systems is to regulate controlled substances and track their movement. Accurate recording of the use and disposition of controlled substances is required by regulatory agencies, and medication dispensing systems help facilitate this reconciliation process. For more information on hospital automated dispensing systems, see Chapter 10.

Examples of inpatient and outpatient dispensing systems follow:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Type of System</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amerisource</td>
<td>MedSelect</td>
<td>Hospital</td>
</tr>
<tr>
<td>McKesson</td>
<td>Loop Distribution</td>
<td>Outpatient</td>
</tr>
<tr>
<td>Omnicell</td>
<td>MedGuard</td>
<td>Hospital</td>
</tr>
<tr>
<td></td>
<td>Workflow Rx</td>
<td>Outpatient</td>
</tr>
<tr>
<td>Parata</td>
<td>RDS (robotic dispensing system)</td>
<td>Outpatient</td>
</tr>
<tr>
<td>Pyxis</td>
<td>ADS (automated dispensing system)</td>
<td>Hospital</td>
</tr>
</tbody>
</table>

**THE 5 RIGHTS OF MEDICATION SAFETY**

When a technician accepts the job of filling a patient’s prescription, it is very important to always remember the basic rights of a patient in regards to medication safety. A helpful outlook is to think of yourself as the recipient of the medication that is being prepared. You would want extreme care taken in filling your own medication; strive to do the same for others. Checking the prescription at least three times during the filling process helps to ensure accuracy. In addition to always treating patients with respect and ensuring their right to confidentiality, the rights of a patient to medication safety are as follows:

1. The right patient
2. The right drug
3. The right dose
4. The right route
5. The right time
PHARMACIST CONSULTATIONS: WHEN AND WHO NEEDS THEM

As the patient’s medication is entered into the computer system, one of the functions of pharmacy tracking is to determine whether it is a new prescription or a refill. First-time prescriptions are typically flagged in some manner that will alert the pharmacist. If flagging is not automatic, it is the responsibility of the individual pharmacist to check the computer system for this information. If the prescription is new, a sticker is placed on the medication bag, indicating to the technician or clerk that the patient requires an offer of consultation. The federal law is that with all new prescriptions or changes in an existing prescription, a patient receiving Medicaid coverage must be offered consultation. The patient can refuse consultation, but consultation must be offered per the Omnibus Reconciliation Act of 1990 (see Chapter 2). At this time, the pharmacist checks the patient’s records to determine whether there are any potential drug or food interactions; then the pharmacist provides the patient with instructions for the proper use of the medication and describes possible side effects of the drug. At this time, the patient can also ask questions or address concerns specific to the medication (Figure 7-7). While federal law specifically addresses requirements related to those patients reimbursed by Medicaid, many states have passed regulations to mandate verbal, written, or both types of counseling to patients with each new prescription or refill. As with OBRA ’90, the patient has the right to refuse verbal consultation.

Miscellaneous Orders

COMMUNITY SETTING

Unlike first-time prescriptions, transferring of prescriptions and receipt of authorization of refills can be performed by technicians, clerks, and pharmacy interns over the phone, as outlined in the following sections. Although these guidelines are enacted federally, statewide regulations may be more strict, and each pharmacy may have different employee protocols. To determine your state regulations, access your state board of pharmacy website.

DAILY HARD-COPY PRINTING (QUEUE)

Prescription labels are printed early in the morning and rechecked throughout the day. The morning pharmacy personnel should attempt to print the entire
batch of labels before noon, if possible. Since a majority of patients drop off new scripts in the morning and pick them up in the afternoon, printing the queue of scripts in the morning can assist pharmacy personnel employed later in the day. Medication errors and stress will be reduced if employees do not have to search for labels and fill prescriptions at the last minute. It also gives the morning crew more time to resolve any issues with refills, insurance, or physician calls that might occur.

**Refills**

A pharmacy technician may phone a prescriber’s office and receive authorization for a prescription refill. When a patient calls in a prescription refill or a request is faxed, the following information is normally required. However, if the patient does not provide the following information, the prescription information can be accessed from the computer by the patient’s last name.

1. Patient’s name
2. Patient’s home phone number
3. Prescription number
4. Name of the medication, strength, dosage form, and quantity
5. Patient’s date of birth (often needed for the physician to verify patient identity)
6. Last date filled
7. Contact information for the pharmacy

**ZERO REFILL REORDERS**

Many pharmacies have an additional phone number intended for patients desiring to fill prescriptions that have no refills remaining. Typically, the patient should allow 2 days to obtain proper authorization from the prescriber. Technicians are qualified to perform this task under the pharmacist’s direction.

**TRANSFERS**

A pharmacist may transfer a previously filled prescription from one pharmacy to another. Most state boards of pharmacy prefer to allow transfers of a prescription to occur only one time; however, federal law stipulates that controlled substances may be transferred only one time. Always be aware of your board of pharmacy regulations. In general the following rules apply:

- A pharmacy technician may assist the pharmacist in the transfer of a prescription.
- Under the supervision of the pharmacist, the technician may fax a copy of the prescription to another pharmacy. The pharmacist directs the technician on what information is needed from the receiving or transferring pharmacy.
- Notation needs to be made both in the patient profile and on the original script that the prescription has been transferred. This will allow the pharmacy to direct the patient to the location of his or her prescription. When the prescription has been transferred, the original number of pills needs to be reported with the remaining number of pills. For example, Lipitor #100 with 3 refills is a total of 400 tablets. If the patient can only obtain a 30-day supply per month and has filled the script for 3 months, the patient has used 90 pills. The patient thus has 310 pills remaining on the script. This number needs to be reported, not that the patient has 9 refills of 30 pills remaining.
REFILLING AUTOMATED DISPENSING SYSTEM (ADS) MACHINES

Often the technician is responsible for refilling the ADS machines, under the direction and supervision of the pharmacist. Care must be taken to:

1. Guarantee that the right drug is being dispensed into the right dispenser (hopper).
2. Make certain that the NDC number of the hopper matches the NDC numbers for the stock used (e.g., sometimes generic medications change and the tabs/caps are different in color or shape).
3. Verify that the hoppers for the tabs/caps are the correct size (e.g., if too big, 3 to 4 tabs/caps are dispensed at once; if too small, tabs/caps cannot pass through the opening).
4. Ensure that the hoppers are kept clean. Failure to clean the hoppers can lead to mistakes in the counting of tabs/caps.

Filing Prescriptions

After the prescription is filled, the hard copy (i.e., original prescription) is filed for future reference. There are three methods for filing prescriptions (outlined in Table 7-3). If the order is received via e-mail, the script is saved in the computer bank as a hard copy. Federal law states that all prescriptions must be kept on file for a period of at least 2 years, although each state may increase this time. Check your state's board of pharmacy for this information. Filing is done by using the prescription number. On the back of the prescription is a copy of the label used on the dispensed drug, along with the initials of the technician and pharmacist who filled the order. In addition, some states require that all controlled substances (schedules III and IV) that are filled together or with other prescriptions must be stamped with a red “C” 1 inch from the top and on the right-hand side of the prescription label, to make it easier to find. The location of the stamp may differ depending on state law. All schedule II medications must be filed separately; they cannot be sent electronically or by fax, except in emergencies, in which case they must be followed with a hard copy on a tamper-proof C-II prescription form. For an example of a tamper-proof form, see Chapter 2.

Complete filing guidelines are discussed in Chapter 2. Usually, all prescriptions are filed at the end of the day. They are filed in small packets (usually grouped in hundreds) that are marked clearly on the outside with the date for easy reference. These are kept on the pharmacy premises. In addition to the hard copy, the computer-scanned copy indicates whether a drug is a controlled substance and lists all the other information required by federal and state regulations. At the end of the workday, electronic backup copies are usually made of all the orders in the system in case of a computer malfunction.

TABLE 7-3 Filing the Prescriptions

<table>
<thead>
<tr>
<th>System</th>
<th>Drawer I</th>
<th>Drawer II</th>
<th>Drawer III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C-II separate</td>
<td>C-III, C-IV, C-V</td>
<td>All other prescriptions</td>
</tr>
<tr>
<td>2</td>
<td>C-II separate</td>
<td>C-III, C-IV, C-V* and all prescription drugs</td>
<td>All other prescriptions</td>
</tr>
<tr>
<td>3</td>
<td>C-II, C-III, C-IV, C-V*</td>
<td>All other prescriptions</td>
<td></td>
</tr>
</tbody>
</table>

*If any C-III, C-IV, or C-V controlled drugs are kept with non–controlled drugs (system 2) or mixed with C-II drugs (system 3), they must be stamped with a red “C” for easy identification. All records must be kept on site for no less than 2 years. Many states, however, have longer requirements for keeping records; remember that the strictest law is the one that must be followed. When taking inventory, one must have exact counts of C-II substances at all times.
EARLY FILLS

A prescription can be filled early if the patient has a good reason; for example, the patient is going on vacation for an extended time, or the patient lost his or her medication. In these cases, the pharmacy may be able to obtain preapproval from the insurance company to fill the prescription early. Many insurance prescription plans allow for one early refill per medication, per calendar year. A portion of the cost of the drug may be paid to the pharmacy by the insurance company with the balance being paid when the original refill date arrives.

Medication Pickup

Patients can wait for their prescription, have it delivered, or pick it up another day. Many pharmacies provide an automated call service to patients to remind them their prescriptions are ready. Pharmacies have an established time for all prescriptions to be returned to stock (RTS) if not picked up, and this may range from a few days to several weeks. After this time, the medication will need to be reprocessed and the patient will have to wait. All pharmacies have a designated boundary around the counter to promote customer privacy both when dropping off or picking up prescriptions and when asking or receiving patient consultation; specific requirements for pharmacies are established in individual state board of pharmacy regulations. Other patients must stand at a distance and wait to be called to the counter; this promotes adherence to Health Insurance Portability and Accountability Act (HIPAA) regulations (see Chapter 2). Occasionally, a patient has a relative obtain a prescription. For these cases, making a note in the computer that lists the person or persons who are authorized to pick up another person’s prescription is required. Regardless of who obtains the prescription, it is important to ensure that the right person gets the right medication. Therefore check all identification against the prescription before releasing the medication; in addition, the person picking up the medication must sign for it. In the case of a controlled substance, if the person picking up the medication is not the patient, that person must show identification to the clerk or technician and sign for it. All third-party prescriptions must have the signature of the receiver. Also, the pharmacy may require the purchaser to provide identification when picking up a controlled substance prescription.

Billing Patients

The billing portion of processing a prescription varies depending on the patient’s insurance coverage, if any. If the person does not have coverage, there is no additional paperwork because the patient simply has to pay full price for the prescription. Many pharmacies have specials and/or coupons for discounted prices on new prescriptions that can be used at the time of purchase. Most persons have some type of drug coverage so their final price will be dependent upon the information obtained from their insurance card. Each type of insurance has its own limitations and conditions. Each pharmacy is responsible for contacting the coverage program for reimbursement. For more information on the types of insurance and the new Medicare (Part D) medication plan, see Chapter 13.

When the patient first drops off his or her prescription, the insurance company is billed before the medication is filled through a process called online adjudication. The patient’s insurance card should be thoroughly checked. Some of the data that the technician must be able to locate on insurance cards are the Benefit International Identification Number (BIN #), which electronically identifies the insurance carrier; the Processor Control Number (PCN #), which identifies the plan; the ID number; the group number; and the person code (see Chapter 13). If there are any problems with the billing process, the pharmacy
will contact the patient. For example, a wrong person code, a wrong date of birth, or the need for prior authorizations are types of problems that may occur. Prescriptions for **non-formulary** drugs need to be resolved by the pharmacist, who contacts the physician and requests a change to a similar formulary drug. Non-formulary drugs are those medications not approved by drug coverage plans, unless a prior authorization or approved exception occurs. Insurance termination and change of plan/co-pay issues must be investigated by the patient.

## Changing Trends

Interpreting and transcribing prescriptions, producing labels, and filling and checking prescriptions are the “meat and potatoes” of the pharmacy business. Laws such as the Omnibus Budget Reconciliation Act of 1990 require that consultations be given to select patients. The increasing age of the American population has changed the primary focus of the pharmacist from filling prescriptions to interacting and consulting with patients and prescribers. Because of this nationwide change, the technician has been placed on the front line. This responsibility requires the technician to fill prescriptions as quickly and with the same accuracy as a pharmacist. Technicians also must know their limitations at all times. In addition to these capabilities, many technicians are in charge of the billing process and must be skilled in both understanding the policies and procedures of their pharmacy and processing various types of insurance claims. Patients expect perfection and proper billing practices when it comes to their medications. This weight clearly falls on the pharmacist in charge, per pharmacy law, although technicians may also be held accountable (see Chapter 2). This responsibility should never be taken lightly and it requires continuing education in all areas of pharmacy practice.

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**DO YOU REMEMBER THESE KEY POINTS?**

- The various ways a prescription can be submitted to the pharmacy for processing
- The steps involved in filling a prescription
- Who can call in a prescription
- Who can transfer a prescription from one pharmacy to another
- The differences between information on inpatient and outpatient prescriptions
- The type of patient information needed in different pharmacy settings
- The importance of knowing when and why to ask for help from a pharmacist
- The number of times a pharmacy technician should check a prescription while filling the order
- The necessary authorization to use snap-on caps rather than childproof caps
- The auxiliary labels needed for the medications outlined in this chapter
- Why computer dispensing systems are used
- The rights of a patient in regard to medication safety
- When patient consultations are done and who is authorized to do them
- How to process refills
- Requirements of filing prescriptions (hard copies)
- Requirements for patients or family members picking up medication from the pharmacy
Multiple choice questions

1. Of the alternatives listed, which are acceptable ways of receiving all prescriptions except C-II medications?
   A. In person (walk-in)
   B. Called in
   C. Electronically
   D. All of the above

2. When filling a prescription, the best times to check for errors are:
   A. When the order is first received, during filling, and after filling
   B. While filling the order, after filling, and when handing the order to the patient
   C. When checking the original order against the label, against the stock bottle before filling, and before filling the vial and affixing the labeling
   D. Before applying the label, before applying the auxiliary labels, and before giving it to the pharmacist

3. Of the information listed, which is vital information needed from a patient before filling his or her prescription?
   A. Full name
   B. Allergies
   C. Prescription insurance information
   D. All of the above

4. When in doubt about the directions on a prescription, it is best to:
   A. Call the physician’s office immediately
   B. Try your best to decipher the order
   C. Ask the pharmacist for help
   D. Ask a pharmacy clerk for help with interpretation

5. Of the reasons listed, which is (are) the main reason(s) for using automated dispensing systems in a community pharmacy?
   A. To increase the accuracy of filling prescriptions
   B. To help control inventory
   C. To decrease the time it takes to fill an order
   D. All of the above

6. What information is not needed from a prescriber on a prescription order?
   A. Directions
   B. Refills
   C. Manufacturer
   D. Date written

7. Which of the medications listed does not require a safety lid?
   A. Warfarin tablets
   B. Amoxicillin suspension
   C. Nitroglycerin sublingual tablets
   D. All of the above

8. Of the information listed, which is not necessary on a prescription label?
   A. Date filled
   B. Expiration date
   C. Prescriber
   D. Patient’s home address

9. Which one of the rights listed is considered one of The 5 Rights of Medication Safety?
   A. The right to the correct drug
   B. The right to the correct price
   C. The right to a similar drug alternative
   D. The right to the correct strength
10. Of the following basic steps required in filling a prescription, which is the responsibility of the technician?
   A. Filling the prescription
   B. Translating the prescription
   C. Consulting the patient
   D. Entering the information into the database

11. Which one of the following persons cannot send verbal medication orders to the pharmacy?
   A. Ward clerk
   B. Nurse
   C. Physician’s assistant
   D. All of the above can send verbal orders to the pharmacy

12. Which of the following methods of filling prescriptions is not valid?
   A. C-II separate, C-III to C-V and all other prescriptions filled together
   B. C-II to C-V separate, all other prescriptions filled together
   C. All prescriptions filled together
   D. C-II through C-V separate, all other prescriptions filled together

13. What steps should NOT be done when filling medications?
   A. Triple-check your order.
   B. Place label on straight.
   C. Conceal both the NDC and expiration date.
   D. Flag order for consultation if necessary.

14. A prescription can be transferred ____ times.
   A. Zero
   B. 1
   C. 2
   D. As many times as necessary

15. An outpatient dispensing system uses what type of visual double-check of drug information?
   A. It views the medication and double-checks the order.
   B. It uses information contained on a bar code.
   C. It uses information contained on the prescription.
   D. Both A and C are correct.

True/False

If the statement is false, then change it to make it true.

1. Insurance information for billing purposes should be processed when prescriptions are picked up.
2. New prescriptions can be called in or taken into a pharmacy by the patient for filling.
3. When prescriptions are written by a physician for a patient in the hospital, it is not necessary for the order to be presented on a prescription pad.
4. Technicians regularly enter hospital orders and may call the physician for additional information.
5. All prescriptions must have safety lids per federal law.
6. Most pharmacy labeling programs print a second label to be placed on the back of the hard-copy prescription.
7. Technicians need to sign their initials or last name on all prescription labels before passing them to the pharmacist for a final check.
8. Antibiotics typically receive an auxiliary label “Take until gone” to ensure that the patient finishes the course of antibiotic treatment.
9. The Omnibus Budget Reconciliation Act of 1990 ensures that technicians can handle drugs.
10. Technicians cannot take prescription orders over the phone.

11. Prescriptions are often taken by pharmacy clerks in retail pharmacy.

12. Electronic prescriptions must be translated into written form by the pharmacist before they are filled.

13. An order written in the chart of a hospital patient is considered a legal prescription once signed by the prescriber.

14. Only the patient can pick up his or her medications from a pharmacy.

15. All pharmacies are required to have automated dispensing systems according to the rules and regulations of each state’s board of pharmacy.

BIBLIOGRAPHY