Lecture 30 - Medication Errors in the Retail Setting

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Retail Medication Errors

Occasionally we hear from media hype medication errors that occur in a Pharmacy setting and the serious ramifications caused by those errors. What we do not hear, is the multitude of medication errors that occur each day that never reaches the media or even the State Board of Pharmacy (BOP). These errors are quickly taken care with no consequence, as many customers are unaware of the seriousness of the error and business continues as usual.

The United States Pharmacopeia (USP), in conjunction with the Institute for Safe Medication Practices (ISMP), maintains an anonymous database of voluntarily reported medication errors from hospitals and health care facilities nationwide, called MEDMARX. According to USP reports, nearly 200,000 medication errors were documented in MEDMARX in 2002. More than 3000 of these errors resulted in patient injury; 514 required initial or prolonged hospitalization, 47 required interventions to sustain life, and 20 resulted in a patient’s death. (1)

Any Pharmacy setting is open to mistakes which can be either an error in human judgment, the most common kind, or simply an error caused by poor reasoning, carelessness or insufficient knowledge. Although this is a Pharmacy Technician specific CE offering, that does not minimize the errors caused by professional Pharmacists as well.

A medication error is defined as any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of a health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems including: prescribing, order communication, product labeling, packaging, and nomenclature; compounding, dispensing; distribution; administration; education; monitoring and use. (2)

This CE offering will allow the Pharmacy Technician a new way of looking at potential errors in the retail setting and ways to minimize those errors. In doing so, the Pharmacy Technician will be able to offer better patient safety in ensuring the prescription, medication order or IV Admixture is filled without potential error on their part.

Goals and Objectives:
Pharmacy Technician shall understand the importance of:
1. Medication errors in the Retail Setting
2. Types of preventable dispensing errors
3. Role required to limit medication errors
4. Potential liability

The 5 rights of medication administration can also be used in the filling of a prescription order:
- the right patient
- the right drug
- the right dose
- the right route
- the right time

Goals and Objectives:
**Retail Setting**

**Important role of the Pharmacy Technician**

It is so important to understand the role a pharmacy technician plays when filling a prescription or medication order. The majority of customers/patients in the retail setting will see the Pharmacy Technician when they drop off their prescription and when they pick up their prescription.

In the retail setting, when the customer first drops off the prescription taking 10 seconds to make sure all the correct information is the beginning in the prevention of errors.

Is the patient’s full name spelled out completely? Can you read what the medication is, directions, strength, quantity, and the doctor’s name? Does the patient know what medication is prescribed for them? Does the patient know how they are taking the medication? If there is any question whatsoever, ask the Pharmacist for clarification.

The last opportunity to catch any possible mistakes is when the patient comes back to pick up their prescription. Verifying the name of the patient on the prescription bottle along with the medication name will ensure they are picking up the correct prescription.

**Types of Dispensing Errors**

The chart on this page illustrates different types of some dispensing errors which occur on a daily basis in the Pharmacy setting. Most of the errors noted can cause serious harm to a patient that can lead to death. The Pharmacy Technician should understand the importance of each of these potential errors and strive to ensure that none of these exist before giving the medication to the customer.

### Some Retail Dispensing Errors

- Dispensing to wrong patient
- Dispensing the wrong medication
- Dispensing the wrong drug strength
- Dispensing the wrong quantity
- Dispensing the wrong dosage form
- Dispensing an expired medicine
- Mislabeled information
- Omission of additional warning(s)
- Interpretation of order
Dispensing to the Wrong Patient

A very common error in the retail setting is simply when a patient receives the wrong medication. To ensure a Pharmacy Technician is giving the correct medication to the correct patient requires an identifier that the correct patient is the one receiving the medication(s). An example of identifiers would be to not only ask the patients name again, but to ask the patient what is there birth date or phone number before giving the medication to the patient.

Dispensing the wrong medication

There are different facets involved in the dispensing of the wrong medication such as simply misinterpretation of a prescription order which may be due to lack of necessary knowledge required or medication names that sound alike. Confusing drug names is a common system failure. Unfortunately, many drug names can look or sound like other drug names, which may lead to potentially harmful medication errors. Pharmaceutical manufacturers and regulatory authorities are taking measures to determine if there are unacceptable similarities between proposed names and products on the market. But factors such as poor handwriting of prescription or poorly communicated oral prescriptions by the Pharmacist can exacerbate the problem.

Generally a solid background in medication names and indications either from formal education or experience allows the Pharmacy Technician to understand what is being written as most sound-alike medication names do have different uses. Regardless, anytime a prescription name is difficult to read, a Pharmacist should be contacted to interpret the prescription order.

Illegible handwriting on prescriptions for medication orders is a recognized cause of medication error. Poorly written medication orders not only delay medication administration, but also potentially increase the risk for a serious error due to a misunderstanding of the intended drug, dosage, route of administration, or frequency. A prescriber has the obligation to express all orders clearly. A common pitfall for pharmacists is trying to interpret an illegible order rather than clarifying it with the prescriber. Many times pharmacists will ask other colleagues what they think the order says. Decoding errors can occur, and pharmacists may be held liable for their role in dispensing drugs from illegible or ambiguous prescriptions.

In 1 case, for example, a physician, a pharmacist, and a pharmacy were sued as a result of a death caused by an illegible order. The physician intended to order Isordil (isosorbide dinitrate), 20 mg every 6 hours, but because of poor handwriting the pharmacist misread the prescription as Plendil (felodipine, a long-acting calcium-channel blocker), 20 mg every 6 hours. The patient subsequently suffered a fatal myocardial infarction.
Always when dispensing a medication, a Pharmacy Technician should compare the NDC number (DIN in Canada) of the medication bottle and the prescription to ensure the correct medication is being dispensed.

**Example Medication Names that sound alike:**

<table>
<thead>
<tr>
<th>Advicor</th>
<th>Advair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amaryl</td>
<td>Reminyl</td>
</tr>
<tr>
<td>Avandia</td>
<td>Coumadin</td>
</tr>
<tr>
<td>Celebrex</td>
<td>Celexa</td>
</tr>
<tr>
<td>Chlorpropamide</td>
<td>Chlorpromazine</td>
</tr>
<tr>
<td>Clonidine</td>
<td>Klonopin®</td>
</tr>
<tr>
<td>Diabeta</td>
<td>Zebeta</td>
</tr>
<tr>
<td>Difucan</td>
<td>Diprivan</td>
</tr>
<tr>
<td>Insulin</td>
<td>Lantus</td>
</tr>
<tr>
<td></td>
<td>Novolog</td>
</tr>
<tr>
<td>Lamisil</td>
<td>Lamictal</td>
</tr>
<tr>
<td>Serzone</td>
<td>Seroquel</td>
</tr>
<tr>
<td>Zyprexa</td>
<td>Zyrtec</td>
</tr>
</tbody>
</table>

**Dispensing the Wrong Drug Strength**

Serious problems can arise when a prescription drug is given correctly, but in the wrong strength. Solid oral dosage forms that look similar to one another have led to the dispensing and administration of the wrong strength of a drug product. Generally Drug manufacturers will segregate their strengths of medication by packaging and tablet/capsule colors or imprinted markings. In some cases doses will depend on whether the tablet is scored or not which clues one if the strength is correct or not. Strength of medication also should correlate with type of dose schedule being written for.

Another look at strengths is if the tablet/capsule is long-acting or not? Giving of a long acting dose when not warranted can cause serious problems.

Always when dispensing a medication, a Pharmacy Technician should compare the NDC number (DIN in Canada) of the medication bottle and the prescription to ensure the correct medication is being dispensed.
Dispensing the Wrong Quantity

The dispensing of the wrong quantity can lead to under dosing or over dosing of a medication a patient is taking. Under dosing can cause the drug to be sub-therapeutic of which the drug does not completely treat the disease state it is being used for. Over dosing can cause toxicity where the drug can have unwanted side/adverse effects which may cause death.

Generally a patient will view the quantity given as the amount that should be taken. An example sig that indicates to take the tablet *three times a day* can be interpreted until the medication is gone.

The Wrong Dosage Form

Today medications come in different dosage forms in treating specific disease states. Dosage forms allow the medication to reach the targeted area quicker. A medication can come in tablet, capsule, liquid formulations as well as inhaler units to treat respiratory disease states. The same medication can also come in a patch, injectable or suppository formulation.

Always when dispensing a medication, a Pharmacy Technician should compare the NDC number (DIN in Canada) of the medication bottle/package and the prescription to ensure the correct medication is being dispensed.

Understanding which formulation is to be used is critical to ensure the patient is receiving medications that they should be receiving.
Dispensing an Expired Medication

Medication that is expired should never be given to a patient when filling a prescription order. Expired medication can degrade and not be therapeutic for the disease state being treated. Pharmacy Technicians should always look at the expiration of a container to ensure it is not expired.

Mislabeled Information

Due to human qualities, misinterpretation of prescriptions does occur. This is especially true in the name of medication and prescribing directions. An understanding of abbreviations is vital as well as the interpretation of these directions in an easy to understand format for the patient to completely understand how they are required to take this medication.

Some abbreviations that are consistently misunderstood:

- Any abbreviation for the word "daily"
- The letter "u" for unit (it may be mistaken for an extra zero after a drug dose)
- "QOD" for every other day (mistaken for once daily)
- "cc" for cubic centimeter; use "mL"

Another source of error is the use of decimal points, which may result in obvious overdoses of medications. Here are some items to keep in mind:

- Avoid trailing zeros (e.g., Coumadin 1 mg, not Coumadin 1.0 mg)
- Use a leading zero (e.g., Bumex 0.5 mg, not .5 mg)
- Avoid decimal points whenever possible: (e.g., 500 mg, not 0.5 g)
Interpretation of Order

The correct filling of a prescription order does depend on the Pharmacy Technician’s correct interpretation of a written prescription order. Although the Pharmacist does a final check, all attempts to ensure correctness by the Pharmacy Technician is vital.

In some cases the prescription directions may be difficult to interpret due to the handwriting of some prescribers. If any question of the validity in the directions or any part of a prescription order is necessary, the Pharmacist should be notified. In this case the Pharmacist will make necessary changes or call the prescribing physician for clarification.

In some states “verbal orders” are a part of the Pharmacy Technicians role in the retail Pharmacy setting. In this case, it is imperative the Pharmacy Technicians completely understands what is being prescribed and to ask questions if necessary.

The labeling itself of a prescription order should be not only correct but precise and easy to understand by the patient reading it to minimize potential for error on the patient’s part.

Omission of additional information

Additional information would include auxiliary labels that offer general or proper use of medication being given. This information supplements the regular directions on the label and emphasizes the patient understanding of the additional information needed in the taking of this medication.

Technician Liability

With the roles of the Pharmacy Technician changing and increased responsibility required of Technicians, the question arises as to whether the Pharmacy Technician should be held accountable or legally liable for their work.
Both the American Society of Health System Pharmacists (ASHP) and the American Pharmaceutical Association (APhA) feel that the Pharmacist should be the one held accountable or legally liable for anything that leaves the Pharmacy setting. This stance is mainly due to the fact that there is yet a national standardization of training and education required of technicians (although PTCB will require such in the year 2020).

This is not to say that Civil Liability in which an individual causes injury or damage to another through negligence or intentional action can lead to criminal charges and result in punitive damages regardless if the individual is a Pharmacist or Pharmacy Technician.

A Pharmacy Technician can also be Criminally Liability in the stealing or diversion of drugs since this is a criminal act. In this scenario, the Pharmacist could also be charged with negligence in allowing the Pharmacy Technician to obtain drugs illegally.

With more states mandating registration, licensing or certification, the Pharmacy Technician can face licensure/certification liability if they act outside the scope of licensure or certification authority. In this scenario, the Pharmacy Technician can be reprimanded (which would include loss of licensure or certification), for acting without the supervision of a pharmacist, acting as a pharmacist by making judgmental decisions or counseling patients which is a violation of Federal law that could also lead to serious legal implications.

Also, lawsuits generally do not cover just one individual. Generally anyone associated with the filling of a prescription or medication order can be held accountable. This would include the Pharmacist, Pharmacy and in some cases, the organization or parent company. Pharmacy Technicians are often drawn into civil cases as a way of gathering information on the real targets of the lawsuit.

Are Pharmacy Technicians accountable or legally liable for their work? Yes, especially with states beginning to mandate registration, licensing and national certification. As the responsibilities of the Pharmacy Technician increases, so does the potential for legal liability.
Potential for Error

The Retail Pharmacy Setting is a busy place that involves much multi-tasking of which a competent Pharmacy Technician is capable of doing. The problem lies with those Technicians who are not good at multi-tasking causing mistakes to happen and should be delegated with other responsibilities that ensure limitation of errors that can occur or simply, let go. It is not only the Pharmacy Technician that should be reprimanded though as there are a handful of Pharmacists who are in themselves incompetent in what they do.

Another facet is the business aspect of retail Pharmacies that under staff all of the time. This saves money in a for-profit business entity, but ensures the potential of mistakes will occur. Proper solid staffing would ensure the limitation of potential medication errors. Whether that happens at a Pharmacy setting in need is questionable as many simply do not look at patient safety aspect of pharmacy over profits that can be made.

Regardless the Pharmacy setting worked in, the setting alone cannot be an excuse for errors alone. It is up to the individual Pharmacy Technician him/herself who strives to minimize medication errors the best they can. It is unfortunate in most cases; the many Pharmacy Settings are not in-tuned with what is necessary to ensure full patient safety.

Conclusion

In the Pharmacy setting errors will occur, but the ability to understand some potential errors and learn from them does allow the individual Pharmacy Technician ample opportunities to correct themselves when needed. With Pharmacy Technician roles changing dramatically to the dispensing function there is a great chance for liability if a prescription is filled incorrectly and a lawsuit is initiated. The more educated the Pharmacy Technician allows themselves to be by learning as much as they can on-the-job, doing continuing education and working diligently in the Pharmacy setting understanding the importance of “patient safety,” ensures an opportunity for the Pharmacy Technician to grow both personally and professionally.

About the Author

Joe Medina, CPhT, BS Pharmacy, current instructor and former Program Director of a Pharmacy Technician Program at two community colleges in Colorado is a lifetime national advocate for the Pharmacy Technician Profession. Mr. Medina has helped produce several textbooks and co-authored the “Pharmacy Technician Workbook & Certification Review” through Morton Publishing and most recently “The Pharmacy Technician” through Learning Express Publications. With fifteen years as a Pharmacy Technician and twenty years as a Pharmacist, Mr. Medina understands the needs of the Pharmacy Technician and the important role they play in interacting with Pharmacists, Medical paraprofessionals and the community in the Pharmacy setting.
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True or False

_____ 1. legal liability does not occur in the case of a Pharmacy Technician

_____ 2. Always when filling a medication, a Pharmacy Technician should compare the NDC number of the manufactures container to ensure it is the right drug.

_____ 3. Another facet of medication error occurring is the business aspect of retail Pharmacies in the understaffing of personnel

_____ 4. Over dosing of a drug can cause toxicity where the drug can have unwanted side/adverse effects which may cause death.

_____ 5. It is so important to understand the role a pharmacy technician plays when filling a prescription or medication order

_____ 6. Strength of medication also should correlate with type of dose schedule being written for

_____ 7. Another source of potential medication error is the use of decimal points, which may result in obvious overdoses of medications

_____ 8. Medication that is expired should never be given to a patient when filling a prescription order

_____ 9. An example of a patient identifier would be a patient’s phone number or birth date

_____ 10. Regardless, anytime a prescription name is difficult to read, a Pharmacist should be contacted to interpret the prescription order

Once your questions are answered, place your answers to the answer sheet on the following website:  https://form.jotformpro.com/32409439642962

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