# Prescription Verification Strategies

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A very simple schematic of the prescription filling process

| Rx Data Entry | → | **Label Printing** | → | **Count/Pour/Label Selected Medication** | → | **Final Check** | → | Patient Pickup |

There are 3 steps in the prescription filling process where various medication barcode scanning verification strategies may be utilized.  Below are the three steps that ensure the correct medication is selected during the prescription filling process.

1) As part of the prescription Label Printing process

2) When the Counting/Pouring/Labeling of the Selected Medication occurs

3) During the Final Check of the Finished Prescription

Barcode scanning is more accurate and faster than the human eye at comparing all 11 digits of the NDC number.

✓ It doesn't see an 8 when it really is a 3, etc.

✓ All 11 digits of the NDC number need to be compared; just comparing the middle 4 digits of an NDC number can lead to errors.

The 4 digits are not unique to just one drug product. The same 4 digit number can represent at least two different products from two different manufacturers. It is the addition of the 5 digit manufacturer code plus the 4 digit product code that makes a unique 9 digit medication ID number. The addition of the last two digits then just makes it a unique 11 digit number containing a container size ID.

When evaluating your pharmacy workflow it is important to always remember

✓ Pharmacy is a very dynamic environment

✓ Prescriptions may be prepared in several locations within the pharmacy

✓ These locations may move as the Rx volume changes throughout the day

✓ Personnel are typically constantly interrupted by phones calls, staff or patient questions, Insurance issues etc.

This type of environment produces a prescription that is often being prepared in several interrupted steps and of course, interruptions can lead to errors.

Let's examine in more detail these 3 steps of the prescription filling process where various medication bar code scanning verification strategies are often applied.

1) As part of the prescription Label Printing process

      a. The strategy here usually consists of verifying that the proper stock medication container is selected before the prescription label is printed.

      b. Typically a two step process.

            i. First a prescription order tag or receipt, identifying a new or refill prescription order, is scanned to locate the information of the prescription being prepared

            ii. Then the stock medication container is scanned.

The computer compares the stock container's bar coded ID information to the ID of the medication, usually the NDC number, on file for the prescription. When they match the prescription label is printed.

Pro's

    1) Identifies an error before it is made.

    2) May be able to document in the prescription processing software that this verification scan was completed.

    3) It requires almost no training to use.

    4) Barcode scanning is more accurate and faster than the human eye at comparing all 11 digits of the NDC number.

Con's

    1) Has to be built into the prescription processing software's functionality.

    2) Can become a bottle neck. Depending on pharmacy volume this may require multiple prescription label printers or / and verification workstations so that this step does not slow down the prescription filling workflow.

    3) Multiple patient's Rx labels will often be printed before a single prescription is completed, leading to mix ups when the medications are actually counted/poured/labeled

    4) Often requires twice the number of labels to be printed

5) Typically only allows for a medications selection to be verified one time. This may be an issue when;

> There is not enough in the verified container to fill the prescription and another container(s) needs to be verified to finish filling the prescription at that time. There may be no way to scan additional stock containers with this method.

> Short fill – not enough medication is in stock to completely fill the prescription. The balance of the prescription will be filled at a later date. There may be no way to scan the new stock containers with this method.

2) When Counting/Pouring/Labeling of the selected medication one of three scenarios occur:

    I. The verification occurs at workstations primarily dedicated to verification

    II. The use of portable verification bar code scanners

    III. A combination of 1 & 2

Scenario I – The verification occurs at verification workstations

a) Typically uses location specific computer workstations with attached bar code scanners

b) A two step process of scanning an Rx, Transaction or NDC number bar code on the patient label and then scanning the stock medication selected. At some point the NDC number assigned to the patient and the stock containers bar code is compared. The workstation then responds with an indication of whether the correct product has been selected. If it is correct then the medication is counted/poured/labeled.

Pro's

1) Identifies an error before it is made.

2) May be able to document in the software that the verification scan was completed.

3) Bar code scanning is more accurate and faster than the human eye at comparing all 11 digits of the NDC number when the workstation uses the process of comparing NDC numbers.

Con's

1) Often only allows a prescription to be verified once.

2) Can become a bottle neck. Requires enough physical workstations so that verification does not slow down the prescription filling workflow.

3) Doesn't take into account the stop and start nature of prescription filling, have to keep going back to a verification workstation when the prescription filling is interrupted.

4) Not portable, number of verification workstations limited by the space requirement of the workstations that can fit into the workstation prescription preparation area.

Scenario II – The use of portable NDC number verification bar code scanners

a) A two step process that typically consists of scanning

1) A NDC number barcode on the patient label
2) The manufacturers NDC number barcode on the stock medication

The scanner compares all of the digits of the two NDC numbers and responds with an indication of whether the correct product has been selected. If it is correct then the medication may be counted/poured/labeled. The scanner may or may not communicate with the prescription processing software.

Pro's

1) Identifies an error before it is made.

2) Allows the same prescription to be verified as many times as needed for its completion as is needed to have a complete verification scan, count/pour, and label process without interruption.

3) Doesn't require a live communication, wired or wireless, to the prescription processing software. The NDC numbers required to make the verification match are in the bar codes on the patients label and the manufacturers container, thus, eliminating the need for a live communication with the prescription processing software.

4) May be carried to where every a prescription is being prepared. The staff is not locked to a limited number of physical verification workstations when the volume increases.

5) May be able to document in the software that this scan was completed if a synching connection to the prescription processing system is available.

6) More verification scanners can be added without the concerns of workstation space requirements.

7) It fits into the current workflow of the individual person, so the reluctance to use is minimized.

8) It requires almost no training to use.

9) Bar code scanning is more accurate and faster than the human eye at comparing all 11 digits of the NDC number.

10) No problem scanning multiple stock containers when more than one is required to fill the prescription.

11) No problem scanning new stock containers when a short fill occurs and the balance is filled at a later date.

Scenario III - A combination of I & II

Pro's

1) Adding the portable scanners over comes the space requirements of prescription verification workstations.

2) Allows for verifying a single prescription as many times as is needed to have a complete Verification, Count/Pour, and Label process without interruption.

3) During the Final Check of the Finished Prescription

Typically a prescription or transaction number bar code is scanned at the final check station to display on the computers screen a;

i. Copy of the original prescription

ii. Color image of the medication

A visual comparison by a pharmacist of what is on the screen with the actual prescription label and medication is done.

Con's

1) <u>Errors are made before an attempt is made to catch them</u>

2) Inefficient means of catching that the wrong medication has been selected. Catching it at the final check before bagging means that the prescription needs to cycle back through the filling process, be corrected and then go through the Final Check process again. Of course this assumes that all of the errors will be caught.

3) Once a prescription has been prepared incorrectly the odds are increased that one of the errors will be dispensed to a patient. It is best to catch the error before the prescription is prepared.

4) The human eye is not as accurate and is slower than a bar code scanner at comparing all 11 digits of the NDC number, for example it doesn't see an 8 when it really is a 3 etc.

As you review your prescription filling process for accuracy and efficiency improvements I hope that you find this information helpful. The appropriate combination of these methods may be the best means you have of increasing efficiency and minimizing human error when dispensing prescriptions.

About RxScan

For over 15 years RxScan has been providing healthcare facilities with solutions to assist in the preparation, administration and dispensing of medications. Our products are used across the entire country including Puerto Rico.  Over the past several years, we conservatively estimate that several billion medications have been scanned using our solutions.

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