

# Evaluating Medication Errors Occurring During the Outpatient Pharmacy Prescription Refill Process

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## INTRODUCTION

A medication error is often 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 the healthcare professional, patient, or consumer.”<sup>1</sup> In the United States, it is estimated that preventable medication errors impact more than 7 million patients annually, of which 1.5 million are harmed.<sup>2</sup> ISMP received a report indicating that a medication error had occurred at an outpatient pharmacy during the dispensing process when the pharmacy was refilling a prescription for a patient. Upon processing the refill, a pharmacy technician erroneously changed the prescription in the computer system and the wrong medication was dispensed to and consumed by the patient. This prompted us to examine reported medication errors that occur during the outpatient pharmacy prescription refill process.

## OBJECTIVE

Perform a descriptive analysis of medication errors occurring during the outpatient pharmacy prescription refill process.

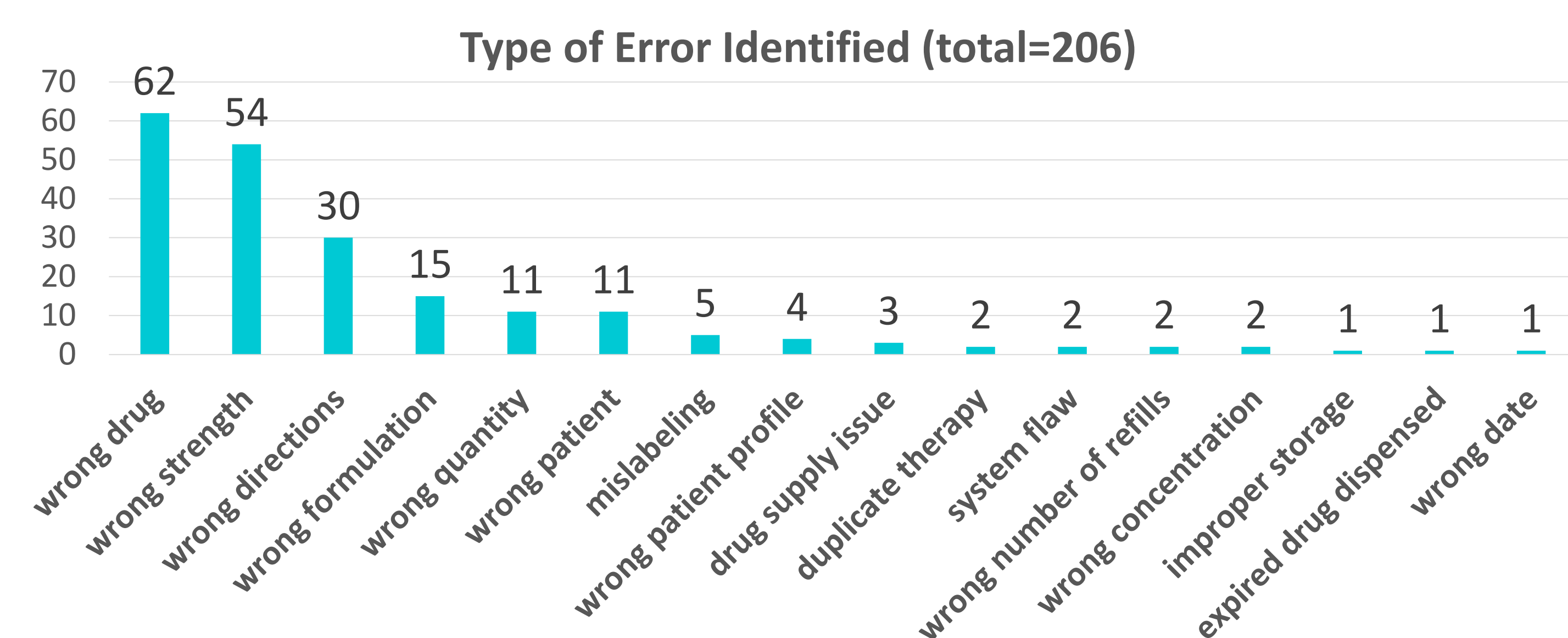
## METHODS

On August 22, 2020, we searched ISMP MERP/C-MERP databases<sup>3</sup> using the keyword “refill” to identify medication errors involving the outpatient pharmacy prescription refill process. The retrieved reports were evaluated for eligibility. Eligible reports were assessed to determine the answers to five key questions:

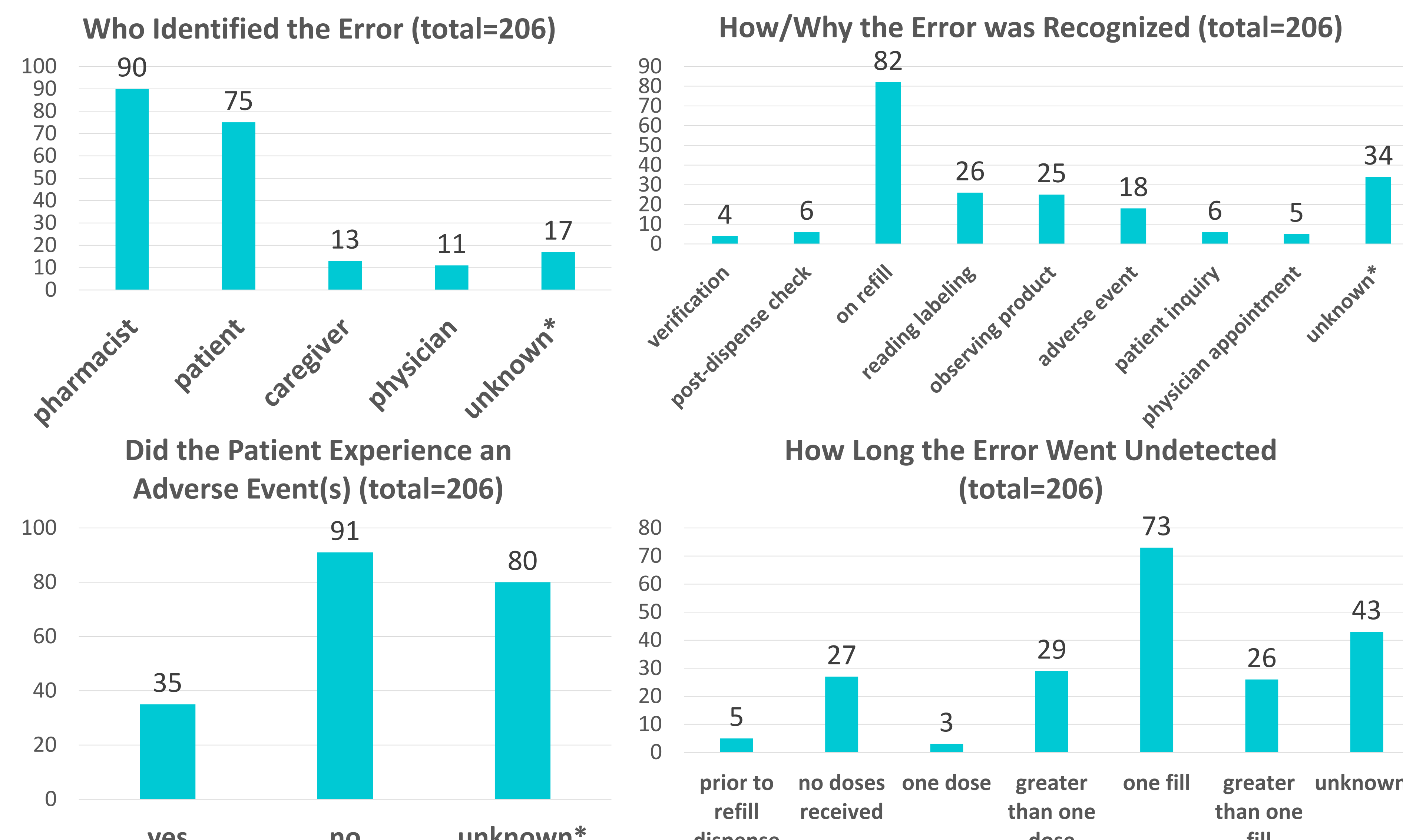
1. What type of error occurred?
2. Who identified the error?
3. How/Why was the error recognized?
4. Did the patient experience an adverse event(s)?
5. How long did the error go undetected?

## RESULTS

The search identified 300 reports. After exclusion of 94 reports that didn’t identify errors involving the outpatient pharmacy prescription refill process, 206 errors were included for analysis.



## RESULTS continued



\*There was not enough information mentioned in the error report to categorize unknowns.

### Type of Error Identified

- The four most common medication errors identified include wrong drug (30%), wrong strength (26%), wrong directions (15%), and wrong formulation (8%)
  - Look-alike sound-alike issues were present in 35% of wrong drug errors
  - Old prescriptions were used in at least 11% of wrong strength errors
  - 73% of wrong direction errors were caught during a refill. Most of the time, patients were not following the wrong directions and were still taking the medication correctly
  - 75% of wrong formulation errors were mix-ups between immediate release and extended release products

### Who Identified the Error

- The pharmacist identified the error in 44% of cases
  - 77% of reports noted that pharmacists caught the error during a subsequent refill
- Patients identified the error in 36% of cases
  - 65% of the errors that patients caught were due to them directly observing the product they received or reading the bottle/label
  - Only 29% of these patients caught the error prior to taking any doses
- Physicians identified the error in 5% of cases
  - Often due to refill too soon requests or adverse events

### How/Why the Error was Recognized

- Approximately 40% of errors were recognized during the refill process irrespective of when the actual error occurred
- An adverse event led to discovery of the error in 9% of cases

### Did the Patient Experience an Adverse Event(s)

- One in six patients experienced an adverse event, although 39% of cases did not specify if an adverse event did or did not occur

## RESULTS continued

### How Long the Error Went Undetected

- One in six patients did not receive a dose of the error-prone fill
- Patients received more than one dose of an error-prone fill almost two-thirds of the time, and nearly half of the errors went unnoticed for at least one whole fill

## CONCLUSIONS AND RECOMMENDATIONS

Medication errors can occur at any point during the medication use process. This retrospective review of ISMP MERP/C-MERP databases further demonstrates that, although patients may initially receive their prescription correctly, medication errors can still occur during the refill process and make it to the patient, occasionally causing patient harm. In this review, patients identified errors over one-third of the time, demonstrating the integral part patients play in ensuring medication safety during the entirety of the medication use process, including during dispensing at the pharmacy and when obtaining prescription refills. Patients can help prevent medication dispensing errors by:

- ✓ Knowing their medications, including name, strength, dose, frequency, and purpose, and maintaining an accurate list of their medications
- ✓ Actively asking questions of their healthcare providers, including physicians and pharmacists, especially concerning new medications or changes in their medication regimen
- ✓ When picking up a prescription:
  - ✓ Taking the prescription out of the bag and visually inspecting the product and reading the label and drug information sheets
  - ✓ Asking themselves: Does the label have my name? My doctor? Do the tablets look the same as last time? Do the drug information sheets say the medication is treating a condition I have? Am I experiencing listed side effects, or am I feeling different from the last time I picked up my medication?

## REFERENCES

1. National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP). Consumer Information for Safe Medication Use. Available from: <https://www.nccmerp.org/consumer-information#:~:text=The%20National%20Coordinating%20Council%20for,professional%2C%20patient%2C%20or%20consumer>
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3. ISMP An ECRI Affiliate. Error Reporting and Analysis Using today’s reports to prevent tomorrow’s error. Available from: <https://www.ismp.org/error-reporting-programs>