



# Reducing Medication Near Miss with Verbal Read Back and Reprint of Prescriptions



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## A. Introduction

Medication errors are a well-known problem in healthcare. Not all medication errors are harmful. In the health care context, a "near miss" is any circumstances that can result in an error. These are classified under the MERP as category A-C. These errors are captured and corrected before reaching the patient. Previous studies have shown that <1% of all medication errors actually resulted in an adverse drug event, while up to 6.7% will potentially cause adverse drug events.<sup>1</sup> Electronic prescription system may have eliminated errors from illegible handwriting, yet computerization can't prevent or catch all errors. Errors related to duration, frequency and site of administration have emerged as the most common types of near misses captured.<sup>3</sup> Avery in 2008 found that prescription error accounted for 88% in a cohort of 2700 patients. Thus, application of an appropriate method for reducing medication near misses is important. The Joint Commission's International Patient Safety Goal 2, have been established to address communication issues by focusing on better communication between health care providers. Verbal read back is a structured and standard communication method, that provides consistent, structured communication between members of the health care team and has shown to be effective in reducing medication error.<sup>2</sup>

## B. Background

Singapore National Eye Centre sees an average of 300000 outpatients annually and approximately 500 of electronic prescriptions were made daily. Unintended prescription errors are common due to heavy and high turn over.<sup>4</sup> From Jan 2011 to Mar 2012, approximately 1734 prescriptions with category A-C were captured. The most common drug-related variables noted were wrong eye (n=255, 0.08%), wrong patient (n=120, 0.06%), wrong frequency (n=54, 0.02%) and wrong duration (n=42, 0.01%) (table 1). Previously, the pharmacist will make a call to clarify before dispensing the medication, however, the information in the electronic system remained as the pharmacists do not have access to change the prescriptions and a vicious cycle of similar errors would be repeated in each visit.

## C. Aim of project is to use verbal read back and reprints to :

- Improve compliance rate of correcting the erroneous prescriptions in the electronic system and ensuring the accuracy of prescriptions before dispensing
- To conclude if the verbal read back and reprints have any impact in reducing the rate of near misses.

## D. Method

Using the principle of read back, a structured verbal read back checklist (figure1), was designed to obtain a verbal confirmation of unclear or wrong prescriptions. Any incorrect prescription corrected after a verbal read back process would require a reprint from the prescriber before any medication was dispensed.

Table 1	N	%
Wrong Eye	255	0.08
Wrong Patient	120	0.06
Wrong Duration	54	0.02
Wrong Frequency	42	0.01

Figure 4

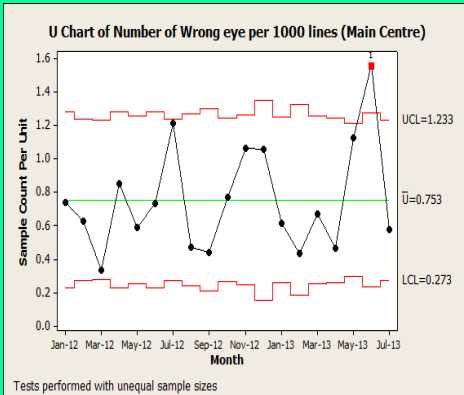
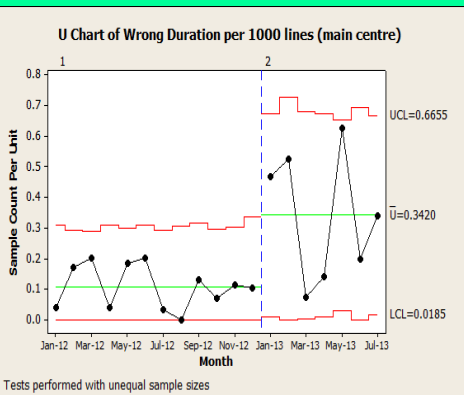


Figure 5



## E. Results

There was a total of 2041 near misses captured during the project time frame from April 2012 till Jul 2013. Out of these, an average of 62% prescriptions were amended and reprinted since the implementation of read back as compared to only 22% before project (figure 2). Figure 3 showed three out of control points between May and August 2013. Sub analysis showed wrong eye and duration attributed to these distributions (figure 4&5). 38% of errors occurred in prescriptions with one line prescription order where it almost doubled to 62% in prescriptions with 2 or more line orders. 50% of the wrong duration occurred from the insufficient medication prescribed versus the next TCU date given. Wrong duration was captured by pharmacy since the appointment date was beyond the TCU date. This was either due to non availability of doctor or patient preferred to come later than the duration prescribed. The project did not have any impact in reducing the number of near misses (table 2).

Figure 2

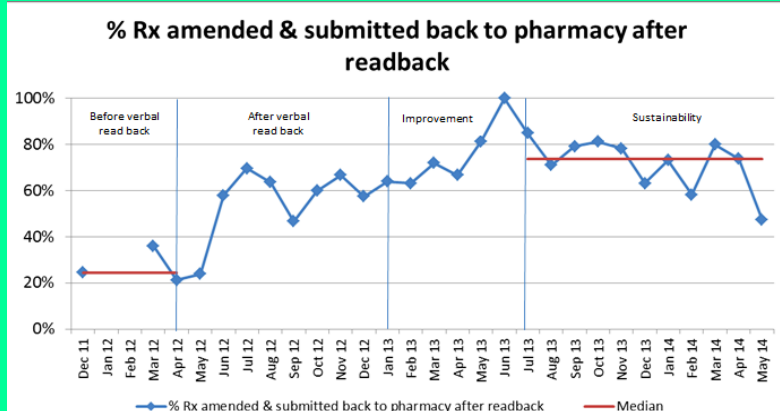


Figure 3

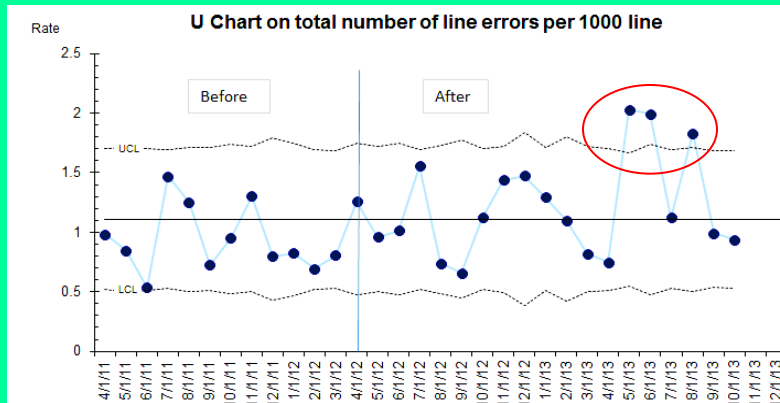


Figure 1

QUALITY IMPROVEMENT PROJECT: REDUCING NEAR MISSES FROM E - PRESCRIPTIONS ORDER

Verbal Medication Amendment Monitoring Record

Part 1: To be completed by staff who initiate the clarification

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Signature: \_\_\_\_\_

PATIENT BAR CODE

Part 2: Type/s of clarification and amendments made

No signature \_\_\_\_\_

Wrong patient name \_\_\_\_\_

Dosage \_\_\_\_\_

Frequency \_\_\_\_\_

Duration \_\_\_\_\_

Strength \_\_\_\_\_

Site/Side \_\_\_\_\_

Type of drug/s, specify \_\_\_\_\_

Other/s, specify \_\_\_\_\_

Part 3: Doctors/Staff who confirmed the amended order/s

Name: \_\_\_\_\_

Clinic: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Part 4: Read back process (please tick to ensure correct process of verbal orders are performed)

☐ Read back performed and confirmation obtained from above named person

Part 5: Action taken: Amended prescription to be reprinted and submitted to pharmacy for filling

☐ Yes

☐ No

Date/Time received: \_\_\_\_\_

Date/Time reminder sent: \_\_\_\_\_

Remarks: \_\_\_\_\_

Table 2

	Before verbal read back		After Verbal Read back	
Type of near miss	N	%	N	%
Wrong Eye	255	0.08	408	0.08
Wrong Patient	120	0.06	180	0.08
Wrong Duration	54	0.02	93	0.02
Wrong Frequency	42	0.01	108	0.02

## F. Conclusion

The compliance rate of correcting erroneous prescriptions and ensuring accuracy of reprinted copies has been sustained on average of 75% after completion of project. Although there was an overall improvement of 53%, the project concluded that verbal read back does not have any impact in reducing prescription near misses. However, it provided some important pharmaco vigilance insights into near misses to help organization make useful recommendations to mitigate electronic prescribing near misses.

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