



Monitoring Of Near Miss Error by Pre-Dispensing Recheck at Out-Patient Pharmacy Service, Department Of Pharmacy, Srinagarind Hospital

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Introduction

Patient safety is a goal in Medication Safety Goals 2008 of the Healthcare Accreditation Institute (public organization)¹. A strategy to achieve this goal was risk management consisting 3 domains (Quality, Evaluation and Utilization management)². The risk which was commonly found in any processes of drug distribution including prescribing, transcribing, dispensing and administration was medication errors. Medication errors could be detected by pharmacist during dispensing process and classified as pre-dispensing³⁻⁵. Therefore, these errors could be solved before risk to the patient occurred. The purpose of this study was to explore the pre-dispensing error detected by rechecking pharmacist and dispensing pharmacy in the aspect of rate and cause of errors.

Method

This study was retrospective descriptive survey study conducted in Out-patient Pharmacy Service, Department of Pharmacy, Srinagarind Hospital during 1 October 2008 to 31 March, 2009. Medication error reports were collected and analyzing based on the type of error including wrong drug, wrong strength, wrong instruction, wrong amount, wrong dosage form. Then, the errors were assessed based severity from no error to

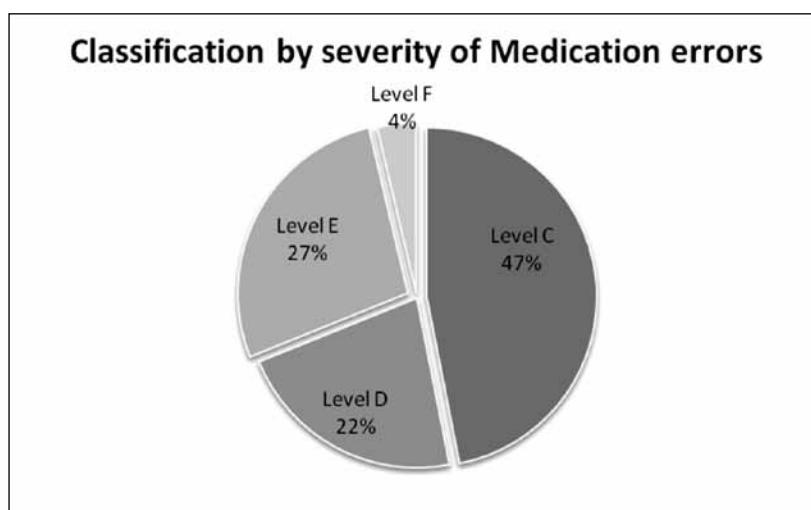
cause death⁶ (range from A to I level) Using data collection form and collected by pharmacist in official work hours. Medication errors are categorized by severity as no errors (class A), error without harmful (class B, C or D), error with harmful (class E, F, G, H) and cause to death (class I).

Result

There were 1,482 pre-dispensing errors (0.092%) from 1,1611,332 medications that could be detected by pharmacists, 1,317 errors (88.6%) by checking pharmacist and 165 errors (11.14%) by dispensing pharmacist. Wrong drug was the most common type of pre-dispensing errors (38.80%) followed by wrong amount (26.7%) and wrong strength (16.6%)(Table 1). The errors was belonged to technician in drug preparing step (63.2%), technician in drug labeling step (21.1%) and pharmacist in checking process (14.3%). These errors were mostly found during 10.01-11.00 am (323 errors, 23.1%). The attribute cause of pre-dispensing errors were lack of concentration, haste and misunderstand and accounted for 59.6%, 16.3% and 3.5%, respectively. The clinical significant of errors were classified in level C 77 times (46.9) followed by level E (27%) and D (22%) (Fig 1). However, these errors were corrected before drug were dispensed to the patients. None of pre-dispensing error caused death.

**Table 1** Medication error classification by type of errors

Type of errors	Number of detected errors (Percent)		
	By re-checking Pharmacist	By dispensing Pharmacist	Total
Wrong drugs	554 (42.1)	20 (12.2)	574 (38.8)
Strength	219 (16.6)	21 (12.8)	240 (16.2)
Instruction	127 (9.6)	85 (51.8)	212 (14.3)
Amount	350 (26.7)	20 (12.2)	370 (25.0)
Dosage form	19 (1.4)	9 (5.5)	28 (1.9)
Others	48 (3.6)	9 (5.5)	57 (3.8)
Total	1,317 (100.00)	164 (100.00)	1,481 (100.00)

**Figure 1** Severity of Medication errors

Note: no errors (class A), error without harmful (class B, C or D), error with harmful (class E, F, G, H) and cause to death (class I)

Conclusion

Rechecking system by pharmacist can prevent and correct medication errors. This strategy could decrease risk of hazard and increase medication safety to patients.

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