Perceptions on Medication Administration Errors (MAEs) Among Nurses at the Philippine Orthopedic Center (POC)

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ABSTRACT

Introduction/Background: Medication administration errors (MAEs) is a serious public health threat that causes patient injury, death, and results in inexpensive health care (Bari, Khan, & Rathore, 2016; Swaminath & Raguram, 2010). The nurses' participation is very visible in the medication equation, thus, may predispose them in committing medication-linked errors considering the chaotic, fast-paced, complex, unpredictable, and stressful circumstances they are working on. The objective of this study was to identify the nurses' perceptions on the occurrence of Medication Administration Errors (MAEs) and barriers to reporting using the Medication Administration Error (MAE) Reporting Survey.

Methods: A quantitative, descriptive study with a cross-sectional research design was conducted. Statistical analysis was done using Stata 12 and variables were described by the mean, standard deviation (SD), frequency, and percentage.

Results: The overall response rate from 240 respondents was 79.17%. The most frequent reason for MAEs according to the nurses was physicians' medication orders are not legible (4.67 ± 1.21), unit staffing levels are inadequate (4.63 ± 1.45), and physicians' medication orders are not clear (4.48 ± 1.20), respectively. The most frequent reason for unreported MAEs was when med errors occur, nursing administration focuses on the individual rather than looking at the systems as a potential cause of the error (4.95 ± 4.33), nurses could be blamed if something happens to the patient as a result of the medication error (4.29 ± 1.48), and no positive feedback is given for passing medications correctly (4.22 ± 1.50), respectively. The highest prevalent non-IV related MAEs included wrong time of administration (M = 3.02 ± 2.37), medication administered after the order to discontinue has been written (M = 2.60 ± 2.11), and medication is omitted (M = 2.48 ± 1.97), all with 0-20% of reported non-IV MAEs. The highest prevalent IV-related MAEs included wrong time of administration (M = 2.76 ± 2.29), medication administered after the order to discontinue has been written (M = 2.45 ± 2.01), and medication is omitted (M = 2.28 ± 1.95). More than half (n = 95, % = 54.29) of the respondents stated that 0-20% of all types of medication errors, including IV and non-IV medication errors are actually reported.

Table 1 Reasons for the occurrence of MAEs (N = 190)

RANK	SURVEY ITEMS AND #	MEAN	SD (±)	VERBAL INTERPRETATION
1	A4. Physicians' medication orders are not legible.	4.67	1.21	moderately agree
2	A23. Unit staffing levels are inadequate.	4.63	1.44	moderately agree
3	A5. Physicians' medication orders are not clear.	4.48	1.20	moderately agree
4	A3. The packaging of many medications is similar.	4.27	1.31	slightly agree
5	A2. Different medications look alike.	4.24	1.32	slightly agree
6	A8. Verbal or telephone orders are used instead of written orders.	4.18	1.33	slightly agree
7	A7. Abbreviations are used instead of writing the orders out completely.	4.15	1.25	slightly agree
8	A15. Many patients are on the same or similar medications.	4.08	1.31	slightly agree
9	A16. Unit staff do not receive enough in-services on new medications.	4.04	1.19	slightly agree
10	A19. Nurses get pulled between teams and from other units.	4.04	1.51	slightly agree
11	A13. Frequent substitution of drugs (i.e., cheaper generic for brand names).	3.76	1.47	slightly agree
12	A6. Physicians change orders frequently.	3.74	1.19	slightly agree
13	A24. All medications for one team of patients cannot be passed within an accepted time frame.	3.70	1.38	slightly agree
14	A27. Equipment malfunctions or is not set correctly (e.g., IV pump, IV infusion set, soluset, nebulizer set)	3.65	1.46	slightly agree
15	A14. Poor communication between nurses and physicians.	3.61	1.31	slightly agree
16	A1. The names of many medications are similar.	3.57	1.33	slightly agree
17	A11. Pharmacy does not label the med correctly.	3.54	1.47	slightly agree
18	A22. Nurses are interrupted while administering medications to perform other duties.	3.52	1.56	slightly agree
19	A17. On this unit, there is no easy way to look up information on medications.	3.27	1.41	slightly disagree
20	A26. Errors are made in the medication card, medication sheet and Kardex.	3.16	1.41	slightly disagree
21	A29. Patients are off the ward for other care.	3.08	1.30	slightly disagree
22	A10. Pharmacy does not prepare the correct med to be issued to the requesting nursing unit.	3.04	1.25	slightly disagree
23	A25. Medication orders are not transcribed to the medication card, medication sheet and Kardex correctly.	2.99	1.45	slightly disagree
24	A9. Pharmacy dispenses incorrect medicine to this unit.	2.98	1.25	slightly disagree
25	A20. When scheduled medications are delayed, nurses do not communicate the time when the next dose is due.	2.93	1.43	slightly disagree
26	A28. Nurse is unaware of a known allergy.	2.83	1.42	slightly disagree
27	A12. Pharmacists are not available 24 hours a day.	2.65	1.37	slightly disagree
28	A18. Nurses on this unit have limited knowledge about medications.	2.55	1.33	slightly disagree
29	A21. Nurses on this unit do not adhere to the approved medication administration procedure.	2.52	1.32	moderately disagree
	Overall	**3.58**	**1.35**	**slightly agree**

Table 2 Reasons for unreported MAEs (N = 190)

RANK	SURVEY ITEMS AND #	MEAN	SD (±)	VERBAL INTERPRETATION
2	B. 42. Nurses could be blamed if something happens to the patient as a result of the medication error.	4.29	1.48	slightly agree
3	B. 43. No positive feedback is given for passing medications correctly.	4.22	1.49	slightly agree
4	B. 37. The patient or family might develop a negative attitude toward the nurse, or may sue the nurse if a medication error is reported.	4.17	1.54	slightly agree
5	B. 44. Too much emphasis is placed on med errors as a measure of the quality of nursing care provided.	4.11	1.39	slightly agree
6	B. 40. Nurses fear adverse consequences from reporting medication errors.	3.93	1.43	slightly agree
7	B. 41. The response by nursing administration does not match the severity of the error.	3.89	1.37	slightly agree
8	B. 39. Nurses are afraid the physician will reprimand them for the medication error.	3.68	1.54	slightly agree
9	B. 36. Nurses believe that other nurses will think they are incompetent if they make medication errors.	3.47	1.62	slightly disagree
10	B. 38. The expectation that medications be given exactly as ordered is unrealistic.	3.46	1.50	slightly disagree
11	B. 32. Filling out an incident report for a medication error takes too much time.	3.44	1.54	slightly disagree
12	B. 34. Medication error is not clearly defined.	3.15	1.45	slightly disagree
13	B. 33. Contacting the physician about a medication error takes too much time.	3.07	1.41	slightly disagree
14	B. 35. Nurses may not think the error is important enough to be reported.	2.86	1.51	slightly disagree
15	B.30. Nurses do not agree with hospital's definition of a medication error.	2.84	1.37	slightly disagree
16	B 31. Nurses do not recognize an error occurred.	2.73	1.36	slightly disagree
	Overall	**3.62**	**1.46**	slightly agree

LEGEND (Table 1 and 2):

Mean	Verbal Interpretation
1 - 1.833	strongly disagree
1.834 - 2.666	moderately disagree
2.667 - 3.499	slightly disagree
3.500-4.332	slightly agree
4.333 - 5.165	moderately agree
5.166 - 6.00	strongly agree

Conclusions and Recommendations: The findings supported the notion that nurses perceive low percentages of MAEs reporting and medication errors are common in clinical practice. The hospital should employ a simple and easy-to-use reporting system to encourage reporting and access to available systems for safety information.

Keywords: Medication Administration Errors, Medication Errors, Nurse

References:

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