

Exploring Nurses' Barriers, Attitudes and Related Factors in Reporting Medication Administration Errors

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Purpose: To explore nurses' perceptions of reporting barriers and attitudes in reporting medication administration errors (MAEs) and to examine the relationship between the barriers and attitudes in MAEs reporting. Medication safety is a major concern worldwide that directly relates to patient care quality and patient safety. Reducing medication administration error incidents is a critical medication safety issue. Research indicated that most of medication errors happened during the administration stage. However, nurses estimated that only 25% to 63% of MAEs were actually reported. Understanding of nurses’ barriers in reporting MAEs, their attitudes and related factors is the initial step to strengthen medication safety.

Methods: A cross-sectional, descriptive correlational design with self-administered questionnaire filled out by the nurses of a medical center hospital in northern Taiwan was conducted. The measurement tools included the Barriers to MAEs Reporting Questionnaire and Attitudes to MAEs reporting Questionnaire. 340 nurses responded to the survey, with 306 valid questionnaires used in the data analysis of this study.

Results: The major perceived barrier was fear of the consequences of reporting (3.18 ± 0.48), followed by lack of perceptions in reporting (2.72 ± 0.75) and the impact by the administrator’s attitudes (2.36 ± 0.54). The staff nurses’ perceptions of reporting barriers was higher than nurse administrators with a significant difference (2.75 ± 0.34 vs. 2.61 ± 0.35 ; $t=2.71$; $p=.007$). Nurses’ perceptions of reporting attitudes was neutral yet slightly positive (2.47 ± 0.40); but the nurse administrators had a more positive attitudes than staff nurses (2.91 ± 0.42 vs. 2.38 ± 0.33 ; $t=-8.43$; $p=.001$). The study also reveals that the more barriers nurses perceived, the more negative attitudes to MAEs reporting. The barriers to MAEs reporting and attitudes to MAEs reporting were negative association ($r =-.41$; $p=.001$). Among a total of 306 administration errors were collected, most errors had occurred during the day shift (45.8%; 140/306). The most common errors involved wrong dose (50.8%; 155/306) and wrong drug (36.1%; 110/306). Among 306 actual errors, 85.6% (262/306) of patients showed no adverse effects. Oral reporting rates to the nursing department was 94.1% (255/272), nurses most common reported to head nurse 81.2% (207/272) and coworkers 66.7% (170/272).

Tables

Table 1 The different perspectives between nursing stuffs and nursing leaders regarding the barriers in reporting MAEs (N=306)					
Item	Content	Nursing staff	Nursing leader	<i>t</i> 值	<i>Rank</i>
		(<i>n</i> = 255)	(<i>n</i> = 51)		
		M (SD)	M (SD)		
18	Error reporting system does not help to improve care quality and safety; therefore, decline to report	2.66 (0.76)	2.16 (0.70)	4.59**	1
13	Unclear about how to operate the reporting system and the necessary process	2.37 (0.61)	1.94 (0.68)	4.22**	2
22	Fear the higher administrator negatively evaluated the ward personnel	2.84 (0.73)	2.43 (0.70)	3.68**	3
12	Not reporting because of unclear definition about medication errors	2.33 (0.67)	2.00 (0.77)	3.15**	4
21	Lack positive feedback, the administrator does not provide strategies to correct the error	2.36 (0.73)	2.08 (0.66)	2.70**	5
5	Fear to be lose job	2.98 (0.70)	2.67 (0.84)	2.50*	6
11	Not sure who should report when discovered an error committed by other nurse	2.51 (0.67)	2.25 (0.72)	2.49*	7
1	Fear the administrator take the error report as evidence and negatively evaluate the responsible staff	3.27 (0.53)	3.47 (0.61)	-2.18*	8
9	Patient does not harm, so no need to report	2.25 (0.57)	2.02 (0.88)	1.80	9
20	The administrator believes that personal inadequacy rather than system factors contributed to medication errors	2.44 (0.73)	2.27 (0.72)	1.51	10
15	Heavy and busy workload prevent to report an error immediately, the time efficiency of reporting is lost	2.71 (0.73)	2.55 (0.73)	1.40	11
16	The error has been reported to doctor and necessary treatment is implemented; therefore, no need to report	2.66 (0.65)	2.78 (0.61)	-1.28	12
17	The reporting system does not warrant anonymity; therefore decline to report	2.73 (0.74)	2.59 (0.73)	1.24	13
14	Reporting an error is time consuming and increases the workload; therefore, decline to report	2.75 (0.76)	2.61 (0.72)	1.19	14
2	Fear to be punished and blamed	3.27 (0.58)	3.37 (0.63)	-1.14	15
10	The responsible nurse lacks the awareness and does not know an error occurring; therefore fail to report	2.53 (0.65)	2.65 (0.77)	-1.10	16
8	Fear to be distrusted by patient and family	3.33 (0.52)	3.24 (0.62)	1.09	17
3	Fear be blamed by doctor	3.12 (0.56)	3.04 (0.69)	0.87	18
4	Fear colleagues' contempt and despised	2.93 (0.66)	2.88 (0.71)	0.42	19
19	The head nurse considered that it is only a minor mistake, so no need to report	1.96 (0.64)	1.92 (0.69)	0.39	20
7	Fear the error report be used as evidence when facing a law suit	3.29 (0.56)	3.25 (0.72)	0.37	21
6	Fear to cause dispute between patient and nurse	3.30 (0.57)	3.31 (0.65)	-0.18	22
Mean		2.75(0.34)	2.61(0.35)	2.71**	
		* <i>p</i> <.05	** <i>p</i> < .01	*** <i>p</i> <.001	

Table 4. Reporting conditions of MAEs (N=306)	
Category	N (%)
Oral report	
No	34 (11.1)
Yes	272(88.9)
Nursing	
Head nurse	207(81.2)
Colleagues	170(66.7)
Supervisor	63(24.7)
Director	28(11.0)
Resident	123(90.4)
Vs	66(48.5)
Director	3(2.2)
Pharmacy	32(11.8)
Pt or family	36(13.3)
Document report	
No	99(32.4)
Yes	207(67.6)
Save on the ward	102(49.3)
Nursing department	76(36.7)
Hospital internet reporting system	58(28.0)
Unclear	42(20.3)
Recording in pt's chart	33(15.9)
Others	10(4.80)

Table 2. The discrepancy attitudes between nursing staffs and nursing leaders regarding the reporting of MAEs (N=306)					
Item	Content	Nursing staffs	Nursing leaders	<i>t</i>	<i>Rank</i>
		(<i>n</i> = 255)	(<i>n</i> = 51)		
		M (SD)	M (SD)		
11	I do not concern whether my colleagues report their medication errors	2.11 (0.58)	3.00 (0.77)	-7.75***	1
9	I will encourage my colleagues to report when involving a medication error	2.64 (0.56)	3.24 (0.59)	-6.84***	2
2	I think to report or not should be depend on the situation; when patient is unharmed it is not necessary to report	2.43 (0.62)	3.06 (0.70)	-6.47***	3
10	Whether to report colleague's medication error is depend on the situation	2.30 (0.61)	2.88 (0.68)	-6.15***	4
1	I think all the medication errors should be reported no matter patient is harm or not	2.76 (0.60)	3.27 (0.63)	-5.50***	5
6	Even hospital administrators encourage nurses to report but I still have insecure feelings toward reporting	1.93 (0.60)	2.51 (0.70)	-5.50***	6
7	I have a conflict and ambivalence attitudes toward reporting medication errors	2.04 (0.60)	2.59 (0.75)	-4.94***	7
13	Over all I possess positive attitudes toward reporting medication errors	2.78 (0.53)	3.16 (0.61)	-4.50***	8
8	I am afraid being punished for not reporting a medication error	2.32 (0.64)	2.61 (0.78)	-2.79**	9
12	I think to report medication errors resulting in positive impacts to the wards	2.52 (0.64)	2.75 (0.69)	-2.25*	10
Mean		2.38 (0.53)	2.91 (0.42)	-8.43***	
		* <i>p</i> <.05	** <i>p</i> < .01	*** <i>p</i> <.001	

Table5. The experience, reasons and feelings in reporting MAEs (N=306)			
Category	n	%	Rank
Reporting experience			
None	199	65.0	1
reporting error self	67	21.9	2
reporting colleagues error	40	13.1	3
Reason for not reporting an error(multiple choice)			
pt no harm	255	83.3	1
only discovered myself, unknown by other	138	45.1	2
the reporting process is too complicated	85	28.0	3
my colleagues considered not necessarily to report	74	24.3	4
doctor considered not necessarily to report	71	23.4	5
it is too late to report less time efficiency	45	14.8	6
head nurse considered not necessarily to report	42	13.8	7
pt only mild influenced	23	7.6	8
others	16	5.3	9
The feelings after reporting an error (multiple choice)			
self- blame	253	83.0	1
heave mood	237	77.7	2
restlessness	221	72.5	3
regret	213	69.8	4
fear	194	63.6	5
guilt feeling	191	62.6	6
others	12	3.9	7
relax	3	1.0	8
The feelings after not reporting an error (multiple choice)			
restless	194	63.4	1
heavy mood	173	56.5	2
guilty feeling	170	55.6	3
fear	160	52.3	4
self- blame	154	50.3	5
regret	119	38.9	6
relax	26	8.5	7
others	9	2.9	8

Table 3. Background analysis of MAEs (N=306)			
Category	Number(n)	%	Rank
Work shift			
Day	140	45.8	1
Evening	113	36.9	2
Night	53	17.3	3
Wrong type (multiple choice)			
Dose	155	50.7	1
Drug	110	35.9	2
Time	59	19.4	3
Patient	33	10.8	4
Route	16	5.2	5
Pt condition			
Regular	188	61.4	1
Critical	42	13.7	2
On chemotherapy	27	8.8	3
Just operation	22	7.2	4
New admission	16	5.3	5
On CPR	11	3.6	6
Pt consequences			
No adverse effect	262	85.6	1
Mild consequences	35	11.4	2
Servers consequence	9	3.0	3
Discovery person (multiple choice)			
Colleague	199	65.0	1
Nurse responsible for error	133	43.5	2
Pt or family	24	7.8	3
Others	7	2.3	4
Doctor	6	2.0	5
Discovery personnel(multiple choice)			
Checking medications	121	39.8	1
Double check	78	25.7	2
Checking orders	74	24.3	3
Preparing medication	71	23.4	4
Sign MAR	42	13.8	5
Others	35	11.5	6
Administering to next patient	33	10.9	7
Pt shows adverse effects	27	8.9	8
Discovered by pt or family	26	8.6	9
Pt: patient			

Conclusions: This study shows that the nurses still have fear and feel insecure even when the administration encourages reporting without blaming; the attitudes of reporting MAEs is also not positive. Thus, it is advisable to strengthen the perceptions of reporting and improve the nurses’ attitudes in reporting MAEs for the overall improvement in MAEs reporting culture.