



Reflection of incident reports on reporters’ awareness of safety culture: observation of an incident reporting system in the past decade at a university hospital in Japan

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Objective: This study aims to explore the differences in awareness of patient safety by and among professions by using the electronic incident reporting data at Shimane University Hospital (SUH) in Japan.

Methods: Electronic Incident Reporting System was renovated in 2009. The 27,447 incident reports filed by staff in the past decade from 2009 to 2018. The incident reports are classified into eight categories. Lag time as a variable was determined at the time between the occurrence of an incident and the reporting to Patient Safety Department, and it was compared among professionals.

Results: SUH is a tertiary referral university hospital with 600 beds.

- The number of hospital staff, doctors, nurses, pharmacists, and others were 1850, 355, 600, 32 and 397 in average in the decade.
- Annual number of reports has been gradually increasing, 1099 reports in 2009 and 2516 reports in 2018, and total number of reports was 24473 (general: 19672, falls/slips: 4801). (Figure 1, 2)

■ With regard to category, the number of Drug related, Drainage tube and other tubes and Falls/Slips were 7521, 5861 and 4801 reports, in decreasing order. (Table 1)

Table 1. Trends of number of incident reports by category

category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	subtotal
Drug- related	358	441	479	791	853	903	1006	942	936	843	7552
Drainage tubes	312	429	475	634	616	623	724	645	712	691	5861
Examination	105	145	131	172	213	217	236	178	327	364	2088
Procedures/ treatm	92	101	129	115	80	82	113	0	254	224	1190
Nursing care	64	67	77	109	72	77	124	312	95	167	1164
Medical devices	42	45	50	57	40	40	45	40	63	61	483
Transfusion	20	30	16	10	7	9	25	12	0	22	151
Others	62	94	59	110	137	99	111	107	248	144	1171
Unknown	0	0	0	0	0	2	0	0	0	0	2
total	1055	1352	1416	1998	2018	2052	2384	2236	2635	2516	19662
Falls/Slips	347	429	365	461	485	486	594	544	491	599	4801

- Examining lag time of 7491 drug related reports by professions, lag times were 9.74 ± 31.725 for doctors (n=399), 2.98 ± 11.324 for nurses (n=6715), and 14.22 ± 24.094 for pharmacists (n=376). (Table 2)
- With regard to Falls/slips, lag times were 3.57 ± 10.176 for doctors (n=4), 1.78 ± 9.881 for nurses (n=1381). (Table 2)
- Pharmacists are not involved in falls/slips reporting.
- Lag time for nurses was the shortest among three professionals in general as well as in falls/slips.

Table 2. Comparison of Lag times of Drug-related and Falls/slips reports among professionals

	Drug-related			Falls/slips		
	n	average	SD	n	average	SD
Dr	399	9.74	31.725	4	3.57	10.176
Ns	6715	2.98	11.324	1381	1.78	9.881
Ph	376	14.22	24.094	0	-	-

Conclusions: From the viewpoint of numbers and Lag times of reports among professionals, nurses may be the highest in the awareness of patient safety. Unlike physicians and nurses, pharmacists have few opportunities to contact patients directly. And, they are likely to submit reports after the discussion of the problems of drug-related incidents.

When time has passed, the awareness for patient safety has to be fostered and Lag time has to be shorter. Regardless of profession, however, Lag times were not getting shorter chronologically.

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