International Journal of Multidisciplinary Research and Publications
ISSN (Online): 2581-6187

Perception of Nurses on Medication Errors / Incidents in Selected Hospitals in Sri Lanka

Nirmala C Loganathan[1], Priyadarshani Galapathy[2]
[1]University Hospital Coventry and Warwickshire, Coventry, United Kingdom
[2]Senior Professors and Chair Professor of Pharmacology, Faculty of Medicine, University of Colombo, Sri Lanka
Email Address: [1]nirmaliloga2017@gmail.com, [2] p.galappatthy@pharm.cmb.ac.lk

***Abstract*—** *Medication safety is one of the major components in patient safety. Medication incidents are defined as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer. But Sri Lanka does not have a proper reporting system for medication incident reporting. This study was aimed to describe the socio demographic details of nurses and the knowledge and attitude on medication errors/ incidents among nurses in selected hospitals in Sri Lanka. This was a descriptive study carried out as a health system research with basic survey with quantitative methods among 249 nurses in 4 tertiary care hospitals, Sri Lanka. According the results, 38.2% of the nurses were less than 30yrs of age and 48.6% were less than 10 years of working experience. 39.8% nurses who were rarely heard the term medication incident/errors during their service period and 37.8% had sometimes come across for the preventive action taken following the event. 34.2% had rarely noted the reporting the incidents/ errors. 82.7% of nurses had agreed on that staff would report medication incidents, if a system is established. As a conclusion, it was identified that there is no proper reporting mechanism. Therefore this study recommended that there were awareness regarding medication incidents/ errors, readiness for reporting if a reporting system is establish a mechanism for reporting the incidents /errors.*

***Keywords*—** *Medication errors / incident, reporting system, nurses*.

I. INTRODUCTION

Health Sector in Sri Lanka delivers free health services to the citizens providing a wide range of management options. Medications play a very important role in the health care delivery system for management of the patients.

Sri Lanka, has achieved excellent health indicators compared to the other developing countries with limited recourses including the medical supplies as reported in the World Bank report in 2018[1]. This achievement is via the health care delivery system and the commitment of health care providers. Having achieved remarkable health indices in Universal Health Coverage (UHC), Sri Lanka now strives to achieve UHC while providing good quality and safe care to patients by ensuring patient safety.

Medication safety is one of the major components in patient safety but unfortunately medication incidents do occur and often go undetected or unreported. Medication use is a complex process involving a variety of people and many steps, with potential for serious error and patient harm. Globally medication errors are identified as a serious challenge to patient safety.

According to National Coordinating Council for Medication Error Reporting and Prevention and ISMP Canada, medication incidents are defined as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer Medication error is defined as a failure in the treatment process, which leads to, or has the potential to lead to, harm to the patient. It involves manufacturing, compounding, prescribing, transcribing, dispensing, administration of a drug and continuous monitoring, of its effects[2]. Medication errors can occur at all phases of this medication use process. Preventing medication errors is important for patient safety and its identification will improve the clinical practices.

Reporting incidents enable learning from errors and to take actions to prevent similar errors occurring. However error reporting mechanisms are complex for implementation and effective system-level approaches are needed to reduce medication errors[3]. The effectiveness of many reporting mechanisms depends directly on the level of response[4]. Implementation of medication incident reporting needs to be established, strengthened and it should be a part of a continuous quality improvement process[4,5].

In Sri Lanka there were less information regarding the practices of reporting medication incidents / errors among health care professionals especially nurses who worked in tertiary care hospitals where medications are abundantly used. Therefore this study was carried out in selected hospitals in Sri Lanka.

II. OBJECTIVE

1.To describe the socio demographic details of the nurses in selected hospitals, Sri Lanka.
2.To describe the knowledge and attitude of nurses on medication incident /errors in selected hospitals, Sri Lanka.

III. METHODOLOGY

This was a descriptive study carried out in 4 tertiary care hospitals, National Hospital of Sri Lanka (NHSL), Castle street hospital for women (CSHW), Lady Ridge way hospital for children (LRH) and National institute of Mental Health (NIMH) involving with nurses. Pretested validated self administered questionnaire was introduced after obtaining written consent for randomly selected nurses working in different departments of the above hospitals. Data was analysed with SPSS version 21.0 after appropriate coding.

Nirmala C Loganathan and Priyadarshani Galapathy, "Perception of Nurses on Medication Errors / Incidents in Selected Hospitals in Sri Lanka," *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, Volume 5, Issue 4, pp. 100-102, 2022.

IV. RESULTS

A. The socio demographic details of nurses are given in Table 1

TABLE 1: Distribution of nurses with socio demographic details (n=249)

Parameters		Number	Frequency
Age (in years)	<30	95	38.2%
	31-40	73	29.3%
	41-50	47	18.9%
	>50	34	13.7%
Sex	Male	9	3.6%
	Female	240	96.4%
Working Unit	Medical	23	9.2%
	Surgical	52	20.9%
	Peadiatric	30	12.0%
	Gynecology &Obstetrics	37	14.9%
	Out Patients Departments	9	3.6%
	Psychiatry	18	7.2%
	Others	77	30.9%
	No answer	3	1.2%
Working experience (in years)	<10	121	48.6%
	11-20	53	21.3%
	21-30	39	15.7%
	>30	36	14.5%

According to the above table, 38.2% of the nurses less than 30years of age and 96.4% were female.

20.9% of them were working in surgical units. 48.6% were less than 10 years of service while 14.5% had more than 30years.

B. Knowledge and attitudes on medication incidents / errors

The following tables give the analysis of results on the key questions used in assessing knowledge and attitudes on medication incidents/ errors, their occurrence and error reporting.

TABLE 2: Current status of nursing experience on medication incidents/ errors (n=249)

	Responses	Never	Rarely	Some times	Often	Always	Total
1.	I have heard the term medication incidents /errors	5 (2%)	99 (39.8 %)	94 (37.7 %)	46 (18.5 %)	5 (2%)	249 (100 %)
2.	I have noted previous reporting of errors /incidents	45 (18.1 %)	85 (34.2 %)	82 (32.9 %)	10 (4%)	27 (10.8 %)	249 (100 %)
3.	I have come cross preventive action being taken following medication incidents/errors?	16 (6.4 %)	26 (10.4 %)	94 (37.8 %)	15 (6%)	98 (39.4 %)	249 (100 %)

39.8% nurses had rarely heard the term medication incident/errors during their service period and 37.7% had sometimes heard the term.

18.1% "never" noted previous reporting of incidents and 34.2% had "rarely" noted the reporting the incidents/ errors.

37.8% had only "sometimes" come across for the preventive action taken following the event

TABLE 3: Attitudes of nurses on medication errors / incidents and reporting (n= 249)

	Response	Disagree	Neither agree nor disagree	Agree	No answer	Total
1.	Medication incidents/ errors could cause significant harm to patients	16 (6.4%)	4 (1.6%)	223 (89.6%)	6 (2.4%)	249 (100%)
2.	Staff involved in medication errors should be punished as for negligence	48 (19.3%)	66 (26.5%)	125 (50.2%)	10 (4%)	249 (100%)
3.	A system to report medication incidents/errors should be established without blaming the responsible staff	92 (36.9%)	36 (14.5%)	112 (45.0%)	9 (3.6%)	249 (100%)
4.	Prefer to have a reporting system for medication incidents, implemented in the hospital	7 (2.8%)	10 (4.0%)	222 (89.2%)	10 (4.0%)	249 (100%)
5.	Staff would report medication incidents, if a system is established	12 (4.8%)	14 (5.6%)	206 (82.7%)	17 (6.8%)	249 (100%)

Almost 90% agreed that medication incidents/ or errors could cause significant harm to patients. 50.2% agreed that the staff involved in medication errors should be punished as for negligence but 26.5% were "neither agree nor disagree" on that.

45% agreed that reporting system should be established without blaming the responsible staff however 36.7% "disagreed" with it. 89.2% agreed that prefer to have a reporting system in hospitals and 82.7% agreed on that staff would report if the reporting system is establish.

TABLE 4: Perception towards the medication incidents / error reporting by nurses (n=249)

	Responses	Agree	Neither agree nor disagree	Disagree	No answer	Total
1.	I realized the harm caused by medication incidents/errors	213 (85.6%)	14 (5.6%)	9 (3.6%)	13 (5.2%)	249 (100%)
2.	I will report medication incidents in future	219 (88%)	14 (5.6%)	10 (4%)	6 (2.4%)	249 (100%)
3.	I will promote others to report in future	224 (90%)	9 (3.6%)	7 (2.8%)	9 (3.6%)	249 (100%)
4.	I will not feel guilty to report	181 (72.7%)	19 (7.6%)	34 (3.7%)	15 (6%)	249 (100%)

Nirmala C Loganathan and Priyadarshani Galapathy, "Perception of Nurses on Medication Errors / Incidents in Selected Hospitals in Sri Lanka," *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, Volume 5, Issue 4, pp. 100-102, 2022.

	an incident I am involved					
5.	Reporting will help to prevent such errors in future	233 (93.6%)	5 (2%)	7 (2.8%)	4 (1.6%)	249 (100%)

85.5% agreed that they had realised the harm caused by medication incidents/errors and 88% agreed on they would report in future.
90% agreed that they would promote to reporting the errors in future and 72.7% agreed that they would not feel guilty to report when they had involved the incident.
93.6% agreed that reporting would help to prevent the errors/incidents in future.

V. DISCUSSION

Medication errors are a major problem pertaining to patient safety in our healthcare system. Considering the socio demographic details of the nurses, majority were less than 30years of age (38.2%) having less than 10years of service (48.6%) whereas 14.5% had more than 30years of service. In this study, 37.2% of nurses sometimes had heard the term medication incident/error and 32% of them sometimes had reported (Table 2). And 93.6% had felt reporting will help to prevent errors in future whereas 88% agreed to report incidents/errors in future. 50.2% agreed that the staff involved in medication errors should be punished as for negligence but 26.5% were "neither agree nor disagree" on that.

The collective responses of nurses showed that a system to report medication incidents/errors should be established without blaming the responsible staff and preferred to have a reporting system for medication incidents to be implemented in the hospital. And they thought persons responsible for medication incident/errors are liable to get legal punishment for negligence.

VI. CONCLUSION

This study has identified that there is not adequate awareness among nurses. Further it was shown that not established medication incidents reporting system. However nurses were having positive attitude towards reporting if the reporting system is established in their working settings.

VII. RECOMONDATIONS

There are following recommendations to be considered coming out of this study;

1. To conduct awareness programmes regarding the medication incidents/errors and prevention.
2. To establish a mechanism for reporting the medication incidents /errors.
3. To take appropriate actions for gaps identified.

VIII. LIMITATION

This study was carried out in the major referral hospitals in Sri Lanka in selected wards with selected staff category. If it is expanded to other hospitals in different levels of care and other health care professionals it will give more comprehensive results.

REFERANCES

1. Smith, Owen K.. 2018. *Sri Lanka - Achieving pro-poor universal health coverage without health financing reforms (English)*. Universal health coverage study series; no. 38. Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/138941516179080537/Sri-Lanka-Achieving-pro-poor-universal-health-coverage-without-health-financing-reforms
2. Montesi, G., Lechi, A., 2009. Prevention of medication errors: detection and audit. Br. J. Clin. Pharmacol. 67, 651–655. doi:10.1111/j.1365-2125.2009.03422.x
3. Runciman, W.B., Sellen, A., Webb, R.K., Williamson, J.A., Currie, M., Morgan, C., Russell, W.J., 1993. The Australian Incident Monitoring Study. Errors, incidents and accidents in anaesthetic practice. Anaesth. Intensive Care 21, 506–519.
4. Kritchevsky, S.B., Simmons, B.P., 1991. Continuous quality improvement. Concepts and applications for physician care. JAMA 266, 1817–1823.
5. Beckmann, U., Baldwin, I., Hart, G.K., Runciman, W.B., 1996. The Australian Incident Monitoring Study in Intensive Care: AIMS-ICU. An analysis of the first year of reporting. Anaesth. Intensive Care 24, 320–329.
6. Johnson, J., Thomas, M., 2013. Medication errors: Knowledge and attitude of nurses in Ajman, UAE. Rev. Prog. 1, 2321–3485.
7. Medication Administration Errors in Hospitals: a Systematic Review of Quantitative and Qualitative Evidence. Drug Saf. 36, 1045–1067. doi:10.1007/s40264-013-0090-2