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MEDICATION ADMINISTRATION ERRORS IN PAEDIATRIC WARD: OBSERVATIONAL STUDY

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INTRODUCTION

- × Medication safety issues are an important aspect of the medication use process in hospitals.
- × Medication treatment process is a complicated process.
- × Adherence to medication administration policy steps is an essential.



INTRODUCTION

- × Medication administration stage is the last stage in the medication treatment process.
- × Nurses spend up to 40% of their time administering medications.

STUDY OBJECTIVES



- × To evaluate how the paediatric nurses adhere to the medication administration policy.
- × To identify any medication preparation and administration errors.
- × Also, to identify any contributory factors that may affect the administration process.

METHODS



- × Prospective, direct observational study of paediatric nurses administering medication during their routine practice.
- × 16 steps were evaluated according to the hospital medication administration policy.
- × Observation process was conducted during weekdays only (Sunday - Thursday), (May – August 2014).

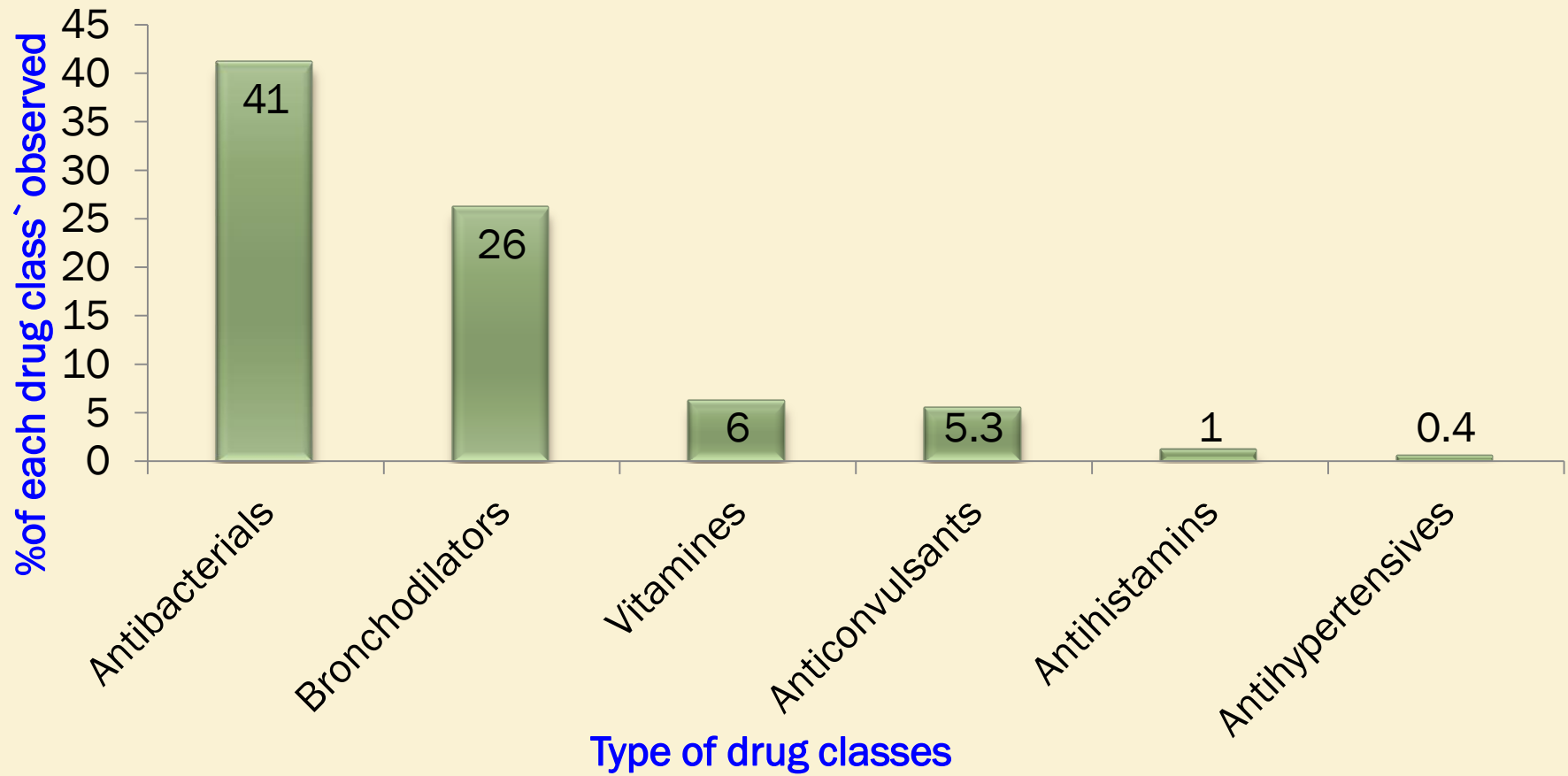
RESULTS



Table 1: Demographic information

Characteristic	Ward
Number of patients	90
Age (months), median (range)	27.6 (0.2 - 126)
Weight (in kg), median (range)	11 (2.3 - 51)
Number of oral drugs (% total)	145 (31.7%)
Number of IV drugs (% total)	193 (42.3%)
Number of inhaler drugs (% total)	118 (26%)
Total number of drugs administered	456 (100%)

RESULTS



RESULTS



Table 2: Adherence rate to policy steps

Policy step	Adherence rate n = 456	Adherence rate %
Two nurses	448	99.1
Vital signs	10	26.4
Drug name	446	98.7
Correct drug	456	100
Correct dosage form	456	100
Drug dose calculated	161	35
Expiry date	283	62.7
Correct volume	358	78.5
Correct IV rate	185	41.2

RESULTS



Table 2: Adherence rate to policy steps (Contd.)

Policy step	Adherence rate n = 456	Adherence rate %
Correct time	425	94.2
Correct label	416	91.2
Correct route	440	96.4
Patient ID	439	96.2
Allergy	7	1.6
Admin to the patient	398	87.2
Sign to the drug chart	428	93.8

RESULTS



Table 3: Medication administration errors reported

Type of error	Example	No. of errors
Drug drops out	Nurses drop out few drops of Vancomycin IV dose	19
Wrong time	Augmentin IV dose was given 2:18 hr late from prescribed time.	18
Drug given to mothers	Domperidone dose was given to the mother without observing at administration	15
Preparation errors	Prednisolone tablet was crushed to be prepared as solution, nurses did not add enough quantity of water and also did not mix the content properly.	5
Wrong doses	Ceftriaxon IV 300 mg dose was given by nurses instead to 150 mg in drug chart (dose reduced by doctor in drug chart)	2

RESULTS



- × Antibacterial drugs were the most common drug class administered and observed (**41%**).
- × Out of **16** steps observed, **7** steps were reported to have lower adherence rate.
- × In total, **63** medication administration errors were detected during the study period.
- × The incidence error rate is **13.8%**
- × The most common error reported was involved nurses drop out few drops of IV medication before administration, followed by wrong time of administration.

RESULTS



- × Risk factors affect nurses' adherence to policy:
 - Medication administration policy steps need to be more clarified for the nurses.
 - Some of the logistics and administrative issues affects on the nurses adherence to the policy.
 - Shortage in some of instruments that used in drug administration process.
 - Shortage in the number of paediatric nurses in the ward (1 nurse to each 5 patients).

CONCLUSION



- x The medication administration policy and procedure need an urgent revision to be more applicable for nurses in practice.
- x Paediatric nurses knowledge and skills regarding to medication administration process should be improved.



Questions?



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attention

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