Direct observation approach for detecting medication errors in a pediatric neurology ward

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Abstract:
Medication errors are higher in pediatric patients and because of their vulnerability, it is necessary to assess the different types of errors and their prevalence, to prevent further harm. Direct observation has been shown to be more efficient and accurate than chart review and incident reporting in detecting administration errors, but there is a few studies that have been done and using this method. This was a prospective, cross-sectional study. Observer effect on the behavior of the person who is being observed. This study was performed in a pediatric teaching hospital. The observer directly observed preparation and administration of medications by one nurse in three routine daily drug rounds in pediatric neurology ward. The observer exactly noted the details that nurses did with the medication for preparation and witnessed the drug administration to the patients. Then she compared the notes with the physician’s order, manufacturers’ instructions, literature and nurse’s note and any discrepancy were detected as an error. Finally all data collected were entered into and analysed using SPSS 16.0 software. We totally observed 31 patients and 128 doses administered to them during the 7 days of the study. Error rate of 62% was detected for these 128 observed doses. From these, 34% and 36% occurred respectively in Preparation and Administration stages. The most common types of drug preparation errors were wrong Reconstitution solvent (13%) and wrong Reconstitution volume (11%). In drug administration stage, the most frequent error was Wrong dose error (26%). Since the standard for medication error rate is defined to be 5% and must be not exceeded, we found that preparation and administration errors are frequent and very common in our studied ward.

Keyword: Direct observation, Medication errors, pediatric, neurology ward