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Improvement Project on the Enhancement of Correct Infusion Rate

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Introduction

Incidents due to wrong infusion rate happened on and off in Paediatrics and Adolescent Department QMH. Giving medication at a wrong infusion rate could cause serious outcome and even fatal. Seven categories of errors were identified from analysis of the medication incidents from Risk Alert, Hospital Authority (HA) 2011-2016 in wrong infusion rate. They were wrong digits, wrong units, wrong concentration, wrong calculation, two infusion rates swapped, mis-interpretation and "Volume To Be Infused" being set as infusion rate.

Major contributing factors identified were lack of independent double-checking, no regular monitoring or noncompliance with the guideline on use of infusion pump. Major recommendations include independent double checking, regular monitoring and always trace infusion lines from the origins to the sites (Risk Alert 2011-2016, HA and Hospital Authority Operation Guidelines on Safe Use of Infusion Pumps 2009).

Objectives

After literature review, a project was implemented from Nov 2015-Nov 2016, aiming to increase staff's knowledge of the recommended measures to enhance correct infusion rate and to improve their practice compliance.

Methodology

A 12-item pre- and post- audit was carried out to check the behavior of staff's compliance before and after education accordingly. Two auditors were assigned to audit each case. Another 15-items pre- and post- questionnaire based on real incidents from risk alert was distributed to test staff's knowledge on the contributing factors of wrong infusion rate and the recommended measures to enhance correct infusion rate.

A practice guide on the correct flow of checking infusion rate was developed and hanging at drip poles for guidance. Slogans to enhance safe practice of correct infusion rate in both Chinese and English were posted up. In order to increase staff's alertness, a fastest singing competition on the English slogan was launched with 97 staffs joined and 50% of participants won a prize.

Result

40 convenient samples were collected both pre and post audit. The overall

compliance rate was increased from 93.75% pre audit to 97.08% post audit.
Questionnaire's full mark score increased from pre-test 24% to post-test 90.2%.
It is very important to enhance correct infusion rate in our daily nursing care. Regular auditing or random checking of staff's compliance should be performed for quality control.