



Service Priorities and Programmes
Electronic Presentations

Convention ID: 800

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**Re-engineering the Transfer Process of Cardiothoracic Patient to and from
Operation Theatre and Intensive Care Unit of Department of Cardiothoracic
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Keywords:

Re-engineering transfer process on post-operative cardiac patients

Patient safety

Occupation safety issue

Introduction

Over 600 open heart surgeries are performed each year in CTSD, QMH. And nearly over one hundred cases are being admitted as emergency and needed to be operated in a short period of time. Therefore, the settlement time both in operation theatre and intensive care unit is crucial. Patients undergoing cardiac operation, whom will be transferred to intensive care unit (ICU) directly from operation theatre (OT) because they are still under anesthesia and being ventilated with endotracheal tube and need ventilator ventilation. The surgical bed is prepared with two portable IV poles mounting on the left side of surgical bed. Then, after arriving ICU, the staff needs a great effort to screw off all infusion pumps and syringe pumps and then transferring them from the portable IV poles onto infusion trolley in ICU. Apart from alignment of the infusion pumps, the staff need to transfer the messy pressure transducer cables, SpO2 cable and ECG cable from portable monitor to bedside monitor, too. And, it prolongs patient settlement time and reduces the efficiency in settling post-operative cardiac patients.

Objectives

Thought the process of re-engineering of the transfer process and brain storm in using the infusion trolley instead of using bed-side IV poles only, it targets to improve as follows: A. Reduction in time and resource wastage during the transfer of patient to and from OT to ICU B. Improvement on patient safety by using infusion trolley for transfer as it will decrease the risk of infusion and syringe pumps falling onto patients related to those pumps are not fixed properly onto IV poles. C. Increase the efficiency of Anesthetist to adjust vasoactive support by placing the infusion and syringe pumps over the potable infusion trolley. D. Allay staff concern on wrist injuries by using the portable infusion trolley as repeating physical motion to screw on and off infusion pump and syringe pump onto the portable IV pole will be minimized. E. In conclusion, it will reduce time spend in transferring patients between ICU and OT and its settlement.

Methodology

Discuss with OT and ICU team for possible changes. Then, a pilot running was started from 1st August 2011 to 30th October 2011 as follows: A. One portable IV pole is mounted on the left side of surgical bed only. B. Infusion trolley will be used starting from the beginning of operation. The infusion pump and syringe pump are placed onto the infusion trolley, while the pressure transducer is placed onto transducer holder which is mounted onto the infusion trolley. C. When operation is finished, the infusion trolley with all infusion pumps, syringe pumps will be directly transferred to ICU with the patient. D. Pressure cables will be prepared, connected and labeled well from bedside monitor to the nearest infusion trolley. With patient warded, team leader could immediately disconnect pressure cables from portable monitor and replace them with the prepared one.

Result

Result: A. Simplified work flow and saved manpower was noticed B. Realign the pressure transducers and cables were easier and faster. C. Removed one IV pole from the left head side of surgical bed to speed up realignment of infusion lines D. Increase the efficacy in adjusting vasoactive infusion by anesthetist during transfer and settlement E. Reduce wrist injury as minimize the need to screw on and off the infusion pumps and syringe pumps from IV drip poles Conclusion: During the pilot run, it showed that i. the process time on postoperative patient settlement decreased from 14 to 7 minutes, which shows 50% reduction in time saving ii. staff's concern on related time wastage in infusion lines and cables alignment, risk of infusion pumps falling off the IV poles which will endanger patient safety and staff exposed to occupation safety hazard on wrist injury was reduced and nearly eliminated