

**Management of Peripherally Inserted Central Catheter in an Intensive Care Unit: a best practice implementation project**

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**Track**

1. Implementação de evidências

**Keywords**

Catheterization, Nursing Care, clinical audit

Background: Peripherally inserted central venous catheter is an intravenous device, which provide secure vascular access to medication, blood and nutrition administration<sup>1-2</sup>. In spite of it, its use in Intensive Care Units (ICU) is limited by needs of high flow rates of drugs, hemodynamic monitoring and potentially incompatible drugs<sup>3</sup>. Studies highlighted that gaps in training and education are barriers to improve practice and safety of patients with peripherally inserted central venous catheter<sup>4-5</sup>.

Objective: The aim of this project is to make a contribution to promote evidence based practice in the management of peripherally inserted central venous catheter, in paediatric and adult patients in an Intensive Care Unit, improving patient outcomes and resource utilization.

Method: The project was conducted in an Intensive Care Unit of a cardiology teaching hospital in Sao Paulo-Brazil. Using the Joanna Briggs Institute Practical Application of Clinical Evidence System and Getting Research into Practice audit tool. A baseline audit of the management of PICC in paediatric and adult patients was conducted, including a sample size of 22 patients and 180 nursing staff. After an educative program, a follow-up audit with 14 patients and 180 nursing staff was conducted by using same audit criteria. The baseline and follow-up audit included key stakeholders and a nurse practitioner at the ICU, leader of this implementation project. The project was approved by Ethical Committee of Clinical Hospital of the Faculty of Medicine of the University of São Paulo.

Results: In baseline audit the peripherally inserted central venous catheter management concerning the flushing indicated poor compliance with the current evidence (2-20%). The results of criteria related to the change of administration sets, including secondary sets and add-on devices had better results, presenting moderate (65%) to high (100%) compliance. Follow-up audit showed improvement in all criteria (ten). Criteria related to flushing achieved 83 to 89% compliance and with the dressing and change of administration sets achieved 100% compliance.

Conclusions: Increased compliance with evidence-based best practices were achieved in all assessed audit criteria. The criteria that reached the highest compliance with the best practice recommendations were related to the prevention of bloodstream infection and loss of peripherally inserted central venous catheter due to obstruction. Future audits are planned to ensure sustainability.