

To create a bedside peripherally inserted central catheter service to increase placement of bedside peripherally inserted central catheter in PICU patients” Conlon et al (2018).

Abstract:

OBJECTIVES: To create a bedside peripherally inserted central catheter service to increase placement of bedside peripherally inserted central catheter in PICU patients.

DESIGN: Two-phase observational, pre-post design.

SETTING: Single-center quaternary noncardiac PICU.

PATIENTS: All patients admitted to the PICU.

INTERVENTIONS: From June 1, 2015, to May 31, 2017, a bedside peripherally inserted central catheter service team was created (phase I) and expanded (phase II) as part of a quality improvement initiative. A multidisciplinary team developed a PICU peripherally inserted central catheter evaluation tool to identify amenable patients and to suggest location and provider for procedure performance. Outcome, process, and balancing metrics were evaluated.

MEASUREMENTS AND MAIN RESULTS: Bedside peripherally inserted central catheter service placed 130 of 493 peripherally inserted central catheter (26%) resulting in 2,447 hospital central catheter days. A shift in bedside peripherally inserted central catheter centerline proportion occurred during both phases. Median time from order to catheter placement was reduced for peripherally inserted central catheters placed by bedside peripherally inserted central catheter service compared with placement in interventional radiology (6 hr vs 34 hr ; $p < 0.001$). Successful access was achieved by bedside peripherally inserted central catheter service providers in 96% of patients with central tip position in 97%. Bedside peripherally inserted central catheter service central line-associated bloodstream infection and venous thromboembolism rates were similar to rates for peripherally inserted central catheters placed in interventional radiology (all central line-associated bloodstream infection, 1.23 vs 2.18; $p = 0.37$ and venous thromboembolism, 1.63 vs 1.57; $p = 0.91$). Peripherally inserted

central catheters in PICU patients had reduced in-hospital venous thromboembolism rate compared with PICU temporary catheter in PICU rate (1.59 vs 5.36; $p < 0.001$).

CONCLUSIONS: Bedside peripherally inserted central catheter service implementation increased bedside peripherally inserted central catheter placement and employed a patient-centered and timely process. Balancing metrics including central line-associated bloodstream infection and venous thromboembolism rates were not significantly different between peripherally inserted central catheters placed by bedside peripherally inserted central catheter service and those placed in interventional radiology.

You may also be interested in...

Appropriate peripherally inserted central catheter utilization

Fractured peripherally inserted central catheter retrieval

Evaluation of peripherally inserted central catheter complications

Reference:

Conlon, T.W., Himebauch, A.S., Cahill, A.M., Kraus, B.M., Madu, C.R., Weber, M.D., Czajka, C.A., Baker, R.L., Brinkley, T.M., Washington, M.D., Frey, A.M., Nelson, E.M., Jefferies, C.T., Woods-Hill, C.Z., Wolfe, H.A. and Davis, D.H. (2018) Development and Implementation of a Bedside Peripherally Inserted Central Catheter Service in a PICU. *Pediatric Critical Care Medicine*. September 17th. .

doi: 10.1097/PCC.0000000000001739.