

Our vascular access team (VAT), like many others, has moved away from chest radiograph after peripherally inserted central catheter (PICC) insertion to a catheter tip positioning system or tip locating device (TLD)" Ramirez et al (2015).

Abstract:

Background: Vascular access is continually evolving in areas of clinical practice and new technology. Our vascular access team (VAT), like many others, has moved away from chest radiograph after peripherally inserted central catheter (PICC) insertion to a catheter tip positioning system or tip locating device (TLD). Our VAT collected data over a 3-year period to assess any changes that resulted from the TLD implementation. The intent was to drill down into the PICC data over the 3 years and quantify any changes gained or lost from the previous practice of post-PICC insertion chest radiograph.

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Methods: A share point database system that was already in place was updated to also incorporate key elements of the TLD. Initial time studies were also collected to validate average cycle time. The VAT was educated and validated on the TLD technology before implementation. Key stakeholders (ie, members of the radiology department, administration, hospitalist physicians, and the medical director) were communicated with and signed off on the project.

Results: Retrospective analysis from 2012-2014 revealed that 1079 PICCs had been inserted. Of those, 781 PICCs were placed successfully with the TLD with an accompanying reduction of 781 chest radiographs. Precycle time averaged 114 minutes compared with post-TLD, which averaged 37 minutes. No changes in deep vein thrombosis rate were identified.

Conclusions: Implementing the dual vector biosensor TLD improved our insertion cycle time by a mean of 77 minutes. The new cycle time provided increased procedure capacity for the VAT. Chest radiograph reduction of 72% was also realized with the TLD over the 3-year period.

Reference:



Ramirez, C., Roy, L. and Foster, G. (2015) Dual Vector Biosensor Catheter Tip Positioning System: A 3-Year Retrospective Analysis. The Journal of the Association for Vascular Access. 20(3), p.151-156.

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