Qualitative interviews and supporting evidence to identify the positive impacts of multidisciplinary vascular access teams[1]

BD IV News, August 4 , 2021

Mussa B, Pinelli F, Cortés Rey N, et.al, Qualitative interviews and supporting evidence to identify the positive impacts of multidisciplinary vascular access teams. Hosp Pract (1995). 2021 Jun 9:1-10. doi: 10.1080/21548331.2021.1909897.

Vascular access devices are widely used in hospitals all around the world for the safe delivery of medication and fluids. Up to 90% of hospitalised patients require an IV catheter during their hospital stay. [2] IV catheters are also prone to failure, and are associated with failure rates of 35-50%.[2] Phlebitis, infiltration, occlusion/mechanical failure, dislodgement and infection, either individually or in combination, can result in the need to remove the catheter before the end of its intended dwell time.

The failure of vascular devices and related complications are costly to the healthcare system.[2] The costs can vary considerably and are dependent on geography, institution and the type of IV device inserted.[2] Failure of vascular devices can be expensive even for the patient, and these costs have been largely unstudied and unquantified in literature.[2]

The implementation of a vascular access team (VAT), which may be defined as a "multidisciplinary group of healthcare professionals, specialists in vascular access, whose primary role is to assess, insert, manage, perform surveillance, analyze service data and solve clinical concerns in this field", has been shown to improve insertion success rates. [3, 4]

In the past few years, VATs have been established in many European hospitals. However, robust evidence of their effectiveness is lacking. For this research, a faculty of nine multidisciplinary VAT leads/members from six European countries were interviewed to determine whether the implementation of a VAT could positively impact patients and hospitals.[1]

BD

In addition to the interviews, a literature search was conducted using Medline® cited peer-reviewed articles published in the past 10 years. The aim was to identify impact data and learn how the implementation of a VAT was helping improve patient safety and hospital efficiency.

Summary of results and key learnings

VAT structure

The interviewees believed that the structure and composition of a VAT vary a lot and are dependent on factors like the size of the hospital, the stage of development of the VAT and the organisational needs of the institution. The role of nurses is extremely important, and the VATs are designated nurse-led services. A clear assignment of roles is also a crucial requirement.

Common barriers to VAT development

According to the interviewees, the lack of investment, awareness, insufficient training, failure to identify as a speciality and conclusive evidence for the need of a VAT are common barriers to its creation. However, it is expected that these barriers will be overcome with time, as the benefits of a VAT are better monitored and recognized.

Observed benefits of a VAT

VAT teams have better device placement rates and a higher percentage of first-time cannulation success, leading to increased patient satisfaction. 3, 4 This may also lead to lower costs, especially when personnel time increases with additional attempts. Costs can range from Euro 65.34 (five attempts) to Euro 9.30 (one attempt).5 The interviewees also reported reduced complications rates leading to a decrease in the length of patient stays and consequently in lowered institutional costs.

The most commonly reported benefit was the time between referral and the placement of the right vascular device, which went from 7 to 10 days pre-VAT to <48 hours post-VAT.

Reporting VAT outcomes

To justify the continued funding of a VAT, it is important to monitor the outcomes like time from referral to placement, complications arising from the wrong placement of the device, and patient satisfaction. The interviewees felt that due to the patients being cross-departmental, the tracking and reporting of complications for a vascular device are often unavailable. While they were aware of reduced patient length of stay, it was difficult to track other metrics like catheter-associated complications or patient satisfaction once the patient left the hospital. Some institutions used solutions like a dedicated helpline for staff and patients for Peripherally Inserted Central Catheters (PICC) or web-based tools to monitor and report complications. The interviewees also recommended that an international database be created to raise awareness and support for VAM.

VATs and COVID-19

The COVID-19 pandemic resulted in a massive overburdening of healthcare infrastructure, making it a challenge to provide venous access to critically ill patients. The interviewees noted that having a VAT in place benefitted the organisations during these times. Many institutions had to devise and implement new ways of working to reduce the spread of infections both among patients and healthcare workers. The interviewees felt that the VATs adapted according to the needs of the patients. Bedside magnetic tracking and electrocardiography-guided catheter tip positioning, and the placement of stable devices in long-term COVID-19 patients were also performed by VATs. Improved patient outcomes were also seen in institutions with a centralized vascular access service due to better monitoring of vascular access devices.

Click here to read the article on BD IV News

https://eu.bd.com/iv-news/scientific-publications/qualitative-interviews-and-supporting-evidence-to-identify-the-positive-impacts-of-multidisciplinary-vascular-access-teams1/

REFERENCES

1 Mussa B, Pinelli F, Cortés Rey N, et.al, Qualitative interviews and supporting evidence to identify the positive impacts of multidisciplinary vascular access teams. Hosp Pract (1995). 2021 Jun 9:1-10. doi: 10.1080/21548331.2021.1909897. Epub ahead of print. PMID: 33781151.

2 Helm RE, Klausner JD, Klemperer JD, et.al . Accepted but unacceptable: peripheral IV catheter failure. J Infus Nurs. 2015 May-Jun;38(3):189-203. doi: 10.1097/NAN.0000000000000100. PMID: 25871866.

3 Carr PJ, Glynn RW, Dineen B, et al. A pilot intravenous cannulation team: an Irish perspective. Br J Nurs 2010; 19(10): S19–S27. doi: 10.12968/bjon.2010.19.Sup3.48214. PMID: 20622770.

4 Moureau NL, Trick N, Nifong T, et al. Vessel health and preservation (Part 1): a new evidence-based approach to vascular access selection and management. J Vasc Access 2012; 13(3): 351–356. doi: 10.5301/jva.5000042. PMID: 22307471; PMCID: PMC6159814.

5 van Loon FH, Leggett T, Bouwman AR, Dierick-van Daele AT. Cost-utilization of peripheral intravenous cannulation in hospitalized adults: An observational study. J Vasc Access. 2020 Sep;21(5):687-693. doi: 10.1177/1129729820901653. Epub 2020 Jan 23. PMID: 31969049.

BD - Europe, Terre Bonne Park – A4, Route de Crassier 17, 1262 Eysins, Switzerland

bd.com

BD, the BD Logo and BD PosiFlush are trademarks of Becton, Dickinson and Company.
© 2021 BD and its subsidiaries. All rights reserved. BD-38472