

# Quality Improvement Project for Patients with Central Venous Catheters: Utilizing Smart Phrase Technology to Educate Central Venous Catheter Patients at Discharge

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## **Introduction/Background**

Central venous access is a commonly performed procedure in Interventional Radiology (IR). With the deployment of the Electronic Medical Record (EMR) there was no standard set of discharge instructions available for patients receiving Central Venous Catheter (CVC) placements in IR. Because oncology patients have a high risk of developing Central Line Associated Bloodstream Infections (CLABSIs), there is a need for proper education for patients and families that are responsible for caring for their CVC independently, once discharged. An intervention to address this was to provide written discharge materials to patients about the necessary care of the CVC, which can increase patients' knowledge of the CVC and help them achieve self confidence in maintaining their access at home.<sup>1</sup> Nurses are often the first to initiate patient education and developing and utilizing SmartPhrases that have been developed from legacy paper discharge instructions will also enhance nursing knowledge on current CVC practices. This will facilitate CVC teaching and provide resources to enhance the patient education discharge processes.

## **Methods**

Beginning in April of 2017 and over the course of the next three months, using an interdisciplinary collaborative approach with practice providers and nurses, we began the systematic process of reviewing our current written patient discharge information. Through the use of SmartPhrase development, a feature in the EMR that allows users to create a word document that can be saved and shared with other users, we were able to improve and integrate the pre-existing patient discharge education materials into the Electronic Medical Record (EMR). SmartPhrases are text, ranging from one word, to multiple pages of material, generated by typing the name of the SmartPhrase, preceded by a period. This solution allows providers to customize and attach the Patient Discharge Instructions content to the After Visit Summary (AVS) which then becomes part of the encounter documentation in their Medical Record.

## **Results**

The result of this project has been successful and provides a standard set of CVC discharge teaching information for patients and their families, and nurses to review together at time of discharge. IR post procedure nurses are continuously monitoring each CVC patient and the associated discharge instructions to educate the patient using the text that populates from the CVC SmartPhrase in the AVS. This is printed for patients reference and resource.

## **Discussion/Conclusion**

Insufficient care instructions may impede the ability of patients and their families to safely care for their CVCs at home and may contribute to complications and readmissions. Using the innovation of technology, SmartPhrases were developed from existing legacy paper based forms. The project was initiated to revise and standardize the existing written materials for patients and families caring for their CVCs at home, provide additional resources to nurses to teach patients about CVC discharge care, and reduce the incidence of CLABSI's. Since the initial implementation, there has been positive feedback from nurses, providers, and patients and families.

## **References**

1. Park, JY. Implementing a central venous catheter self-management education program for patients with cancer. *Journal of Oncology Nursing*, 2016; 25:12; 1-8.