The objective of the study was to reduce, by a bundle of interventions, the global bloodstream infections and catheter related bloodstream infections rates in neutropenic hematology patients with a long-term central venous catheter.” Martinez et al (2015). 

Abstract:

INTRODUCTION: The objective of the study was to reduce, by a bundle of interventions, the global bloodstream infections and catheter related bloodstream infections rates in neutropenic hematology patients with a long-term central venous catheter.

MATERIAL AND METHODS: This was a non-randomized prospective study. It was conducted in a 20-bed hematology oncology unit (Portuguese Institute of Oncology, Porto, Portugal) between 1st of August 2010 and 31st of January 2012. In this period we introduced a bundle of interventions (study group) and compared the results with the six months prior to implementation (control group). The interventions consisted in the use of a neutral pressure mechanical valve connector instead of a positive pressure mechanical valve connector, a more frequent change of this connector and a more efficient clean solution. One hundred and sixteen hematology patients with a long-term central venous catheter at time superior of 72 h, with 8 867 central venous catheter days [6 756 central venous catheter days in the study group and 2 111 central venous catheter days in the control group] were included in the study.

RESULTS: A significant reduction in bloodstream infections rates and catheter-related bloodstream infections rates was achieved. Bloodstream infections rates: [32.69 (control group) vs. 9.43 (study group)], incidence reduction 71% and catheter-related bloodstream infections rates: [17.53 (control group) vs. 4.73 (study group)], incidence reduction 71%. No significant difference (p > 0.05) was found in the neutrophil count at the time of blood culture samples between groups: 69% (< 500 neutrophils/mm³) [71% (study group) vs. 68% (control group)].

CONCLUSIONS: The introduction of this bundle of interventions based on the variables of
patient, product and practice, supported by the Healthcare and Technology Synergy framework, quickly resulted in a significant reduction of bloodstream infections and catheter related bloodstream infections rates.

Reference:


Thank you to our partners for supporting IVTEAM