Abstract:

BACKGROUND: Inappropriate catheter requests at the McGill University Health Centre (MUHC) led to significantly increased costs and early catheter malfunction or infection. Dual-lumen catheters were often requested and inserted when only a single lumen was required, and inappropriate catheter care on the wards led to early infection or thrombosis.

METHODS: A full-time registered nurse was hired to analyze and transform the vascular access program of the MUHC. Catheter selection was streamlined on the basis of clinical unit need. Clinical and cost data were collected between May 2011 and January 2012.

RESULTS: Requests for vascular access at the MUHC have been standardized and centralized. Single-lumen catheters are inserted unless a specific indication for a dual-lumen catheter is provided. To date, data have been collected on >4,000 catheter insertions, both before and after the switch to the single-lumen program. Dual-lumen catheters have been required in only 50% of cases. Reinsertion rates have decreased, leading to the first year-over-year reduction in peripherally inserted central venous catheter insertion since data collection began in 2002. The program has also resulted in significant reductions in central line-associated bloodstream infection and catheter-related thrombosis. Decreased maintenance
Complications and costs associated with the minimum number of PICC lumen have led to overall savings for the MUHC of approximately $1.1 million.