

“Electronic Device to Prevent Central Line Infections”

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Dr. Hutchens received funding to continue development of a device to reduce microbial contamination of central venous access ports. Reduction of central line associated bloodstream infections (CLABSI) is a priority of the World Health Organization, the Center for Disease Control and Prevention, and the Joint Commission. A “never event”, CLABSI nonetheless occurs 41,000 times per year in the United States, and costs approximately \$10,000 to \$20,000 per event – a cost which is not reimbursed by the Centers for Medicare Services. The mortality from CLABSI is 12-25%. Existing strategies to reduce infection include hand hygiene, glove use, and conventional hub care, but despite wide adoption of these strategies, CLABSI is still common. Any new strategy must increase effectiveness without adding significant cost, nurse workload, or complexity in an already complex health care environment. In a pilot microbiology study, staphylococcus aureus counts following use of the Dr. Hutchens’ device compared favorably with those after standard care, without need for human intervention.