Evidence-Based Practice NK3

a. Provide one example, with supporting evidence, of clinical nurses’ implementation of an evidence-based practice that is new to the organization.

AND

b. Provide one example, with supporting evidence, of clinical nurses’ use of an evidence-based practice to revise an existing practice within the organization.

Example a: Clinical Nurse’s Implementation of a New Evidence-based Emergency Plan for Unresponsive Patients with a Left Ventricular Assist Device

Clinical Nurse
In August 2016, Libby Guerrero, BSN, RN, Clinical Nurse II, newly hired to WakeMed’s Cardiac Rehabilitation Program, inquired about resuscitation guidelines for patients with a left ventricular assist device (LVAD) at WakeMed. While WakeMed is not a VAD center that implants LVADs, patients with these devices had begun attending cardiac rehab at WakeMed.

Basic Life Support and Advanced Cardiac Life Support (ACLS), the standard resuscitation protocols at WakeMed, do not address the resuscitation of patients with an LVAD. For LVAD patients, traditional chest compressions carry the risk of dislodging the device from the left ventricle. It was therefore evident to Guerrero that an algorithm was needed to appropriately guide staff members in the event of an LVAD patient becoming unresponsive at WakeMed.

On August 2, 2016, Guerrero emailed Tracey Weeks, BSN, RN, CCRN Alumnus, Education Resource Specialist and coordinator for ACLS programming at WakeMed’s Raleigh campus, to ask whether WakeMed had a resuscitation protocol for LVAD patients. (Evidence NK3a-1, Inquiry Email) Weeks discussed this with Felecia Williams, PhD, RN, CCRN, Clinical Educator/Supervisor in WakeMed Heart Center Administration, and Jeannie Moore, MSL, BSN, RN, CCRN, NE-BC, Director of Heart Center & Quality Programs for WakeMed Heart Center Administration and Chair of WakeMed’s Code Blue/Rapid Response Team Committee, and determined that WakeMed did not have an emergency protocol specific to LVAD patients.

Evidence-based Practice
Guerrero performed a literature search the first two weeks of August 2016 to find evidence detailing the guidelines for resuscitation of an LVAD patient. The Journal of Cardiac Failure published the most applicable recent study at the time, which addressed whether or when compressions were appropriate for an LVAD patient to minimize delays in perfusion.

The study, “In-Hospital Cardiopulmonary Arrests in Patients With Left Ventricular Assist Devices,” retrospectively compared in-hospital cardiopulmonary arrests in patients with
an implanted continuous flow LVAD to those without an LVAD. Resuscitative efforts were largely variable in the LVAD population because of the absence of established guidelines for LVAD emergency management. (Evidence NK3a-2, “In-Hospital Cardiopulmonary Arrests in Patients With Left Ventricular Assist Devices”)

The study suggested using an algorithm to standardize LVAD emergency management. Unlike many of the other algorithms proposed in comparable studies, these guidelines were not entirely specific to a VAD center. Guerrero adapted the schematic from this study into a new evidence-based emergency plan for implementation at WakeMed.

Implementation of New Practice
To implement a new evidence-based resuscitation practice, the proposed WakeMed Emergency Plan for Unresponsive LVAD Patient needed to be reviewed by WakeMed’s Code Blue/Rapid Response Team Committee. Guerrero presented the new plan she created to this committee for review on November 9, 2016. (Evidence NK3a-3, November 9, 2016 Code Blue/RRT Meeting Minutes with Presentation)

The WakeMed Emergency Plan for Unresponsive LVAD Patient was approved by the Code Blue/Rapid Response Team Committee on December 14, 2016, and by Rehabilitation Administration in March 2017. (Evidence NK3a-4, Cardiac Rehab LVAD Policy)

Guerrero provided education and competency validation to Cardiac Rehabilitation exercise specialists and nurses from fall 2016 through fall 2017. Guerrero also provided education to the Code Team rounding nurses on April 18, 2017 and to the Code Team intensivists through a presentation to the Adult Special Care Units Committee on April 20, 2017. Mobile Critical Care was informed of the new guidelines on April 25, 2017 through an interdisciplinary meeting.

As of June 1, 2018, WakeMed’s Rehabilitation Hospital began accepting Duke Health’s LVAD patients. In preparation for this addition of LVAD inpatients, Guerrero assisted in writing a new, all-encompassing nursing policy to guide LVAD care at WakeMed. The policy now includes WakeMed’s LVAD emergency management guidelines. (Evidence NK3a-5, Care of the Patient with LVAD: HeartMate 2, HeartMate 3, HeartWare Policy)

The emergency guidelines reflect a scientific statement released by the American Heart Association (AHA) on June 13, 2017, “Cardiopulmonary Resuscitation in Adults and Children With Mechanical Circulatory Support." The statement includes an algorithm to guide LVAD emergency care, which is largely similar to the previously established WakeMed Emergency Plan for Unresponsive LVAD Patient. The new LVAD policy, including the AHA emergency management algorithm, was approved by Nursing Administration on May 31, 2018 and by the Code Blue/Rapid Response Team Committee on June 13, 2018.

Throughout June 2018, Guerrero sent emails to update the Cardiac Rehabilitation staff, Code Team rounding nurses and intensivists, and Mobile Critical Care on the new LVAD policy and emergency procedures. Also in June 2018, Guerrero ensured the
information on the new policy was disseminated to Rehabilitation Hospital clinical nurses and Outpatient Therapy staff through their managers, and to Cardiothoracic Intensive Care Unit clinical nurses through their clinical education supervisors. Guerrero included education on the new policy, including emergency procedures, during in-services she provided for Rehabilitation Hospital Inpatient Therapy staff on June 13, 2018; for Pulmonary Rehabilitation staff on July 6, 2018; and for Raleigh Emergency Department clinical nurses on July 9, 13 and 19, 2018. Lastly, in July 2018, Guerrero distributed the new LVAD policy and AHA scientific statement by email to WakeMed’s five other Emergency Departments and the Raleigh campus Cardiac Catheterization Lab.