

White Plains Hospital Malignant Hyperthermia Protocol

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Abstract Background Information: The Malignant Hyperthermia Association of the United States (MHAUS) mission is to make an MH death a “never event”, and having an adequate supply of dantrolene wherever triggering agents are administered is crucial to this mission. MHAUS has recommended that Dantrolene must be available for all anesthetizing locations where MH trigger agents are used. MH can occur if triggering anesthetics are used in any location such as emergency room, dental surgeries, surgeons’ offices, and critical care units. It was identified that there were educational gaps for MH within White Plains Hospital (WPH). It was clear we needed to update our MH protocol hospital wide. MH education is not traditionally provided to staff outside of the operating room.

Objectives of Project: The perioperative team, who are members of AORN, ASPAN and MHAUS, reviewed the current design and decided there was a need to develop a successful educational plan with the main goal of improving patient care.

Process of Implementation: At WPH the rapid response team (RRT) consists of the primary nurse, critical care clinical nurse, provider, and respiratory therapist. The team suggested developing an MH Kit to be stocked in the ICU medication pyxis. In collaboration with the assistant director of the pharmacy department the team worked on developing an MH Kit adhering to the MH guidelines. The kit would include 3 vials of Ryanodex with 3 vials of sterile water, cold normal saline (x3). Multiple malignant hyperthermia drills were conducted across various departments, including the Emergency Room, Cardiac Catheterization Lab, Labor and Delivery, and Surgical Services. Each drill provided valuable opportunities for improvement and refinement of our response protocols.

Statement of Successful Practice: As a result of these efforts, we successfully developed and implemented a standardized MH protocol extending beyond Surgical Services to other critical care areas. Additionally, WPH introduced an overhead paging system specifically to alert staff to an MH crisis, ensuring a rapid and coordinated response.

Implications for Advancing the Practice of Perianesthesia Nursing: The RRT was designated to respond immediately with dantrolene. Following several drills, the team was able to consistently administer dantrolene within the recommended 10-minute window, demonstrating a significant improvement in emergency preparedness and patient safety.