



# Malignant Hyperthermia Protocol Implementation

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## Introduction

- At White Plains Hospital (WPH), it was identified that there were educational gaps for Malignant Hyperthermia (MH).
- MH education is not traditionally provided to staff outside of the Operating Room. It was clear we needed to update our MH protocol hospital wide.

## MH Taskforce

- In April 2022, a workgroup was formed to create a standardized MH process.
- The group included representatives from all areas within WPH where MH triggering agents were used, including: **Areas within Surgical Services**, the Operating Room, Post-Anesthesia Care Unit, Center for Advanced Medicine & Surgery (CAMS), Ambulatory Surgery Center at Harrison (226). **Areas outside of Surgical Service**, Endoscopy, Cardiac Cath Lab, Labor and Delivery, Radiology, Emergency Department, and Critical Care Units.

## Protocol Implementation

### 2023 Initial implementation Areas within Surgical Services

- Code Blue Button (OR) (*internal call only*) → alerts OR & PACU of MH Crisis
- Obtain MH Cart + Crash Carts
- Call MH Hotline
- Nights/Weekends: Activate RRT

### Outside of Surgical Services:

- Activate RRT
- Call Anesthesia: Before 5pm: #6716 After 5pm: #6199 / #6299
- Call Critical Care RN (#6363)
- Call Clinical Coordinator (#4995 / 4997)
- Critical Care/RRT RN to bring MH Kit (Ryanodex + Binder)
- Obtain Crash Carts
- Call MH Hotline

### 2023 Mock Drills Areas of Improvement Identified:

- CAMS 4<sup>th</sup> Fl. did not have an MH Cart available.
- CAMS 2<sup>nd</sup> Fl. was not included in the MH plan.
- The current process required contacting multiple individuals which was confusing and delayed response time. Nursing suggested implementing a streamlined activation system that simultaneously notifies all required team members.

## Protocol Changes

### 2024 UPDATES:

- Surgical Services Algorithm remained the same.

### Outside of Surgical Services:

- Activate RRT, state “RRT MH” and the location of the crisis.
- Critical Care/RRT RN to bring MH Kit and MH Binder.

### CAMS 2<sup>nd</sup> & 4<sup>th</sup> Fl. Algorithm was created

- Activate CODE BLUE “MH”, state “**CODE BLUE MH**” and the **LOCATION** of the emergency.
- Staff from CAMS 3<sup>rd</sup> Fl. OR/PACU obtains MH cart, cold fluids and brings it to location of MH crisis.

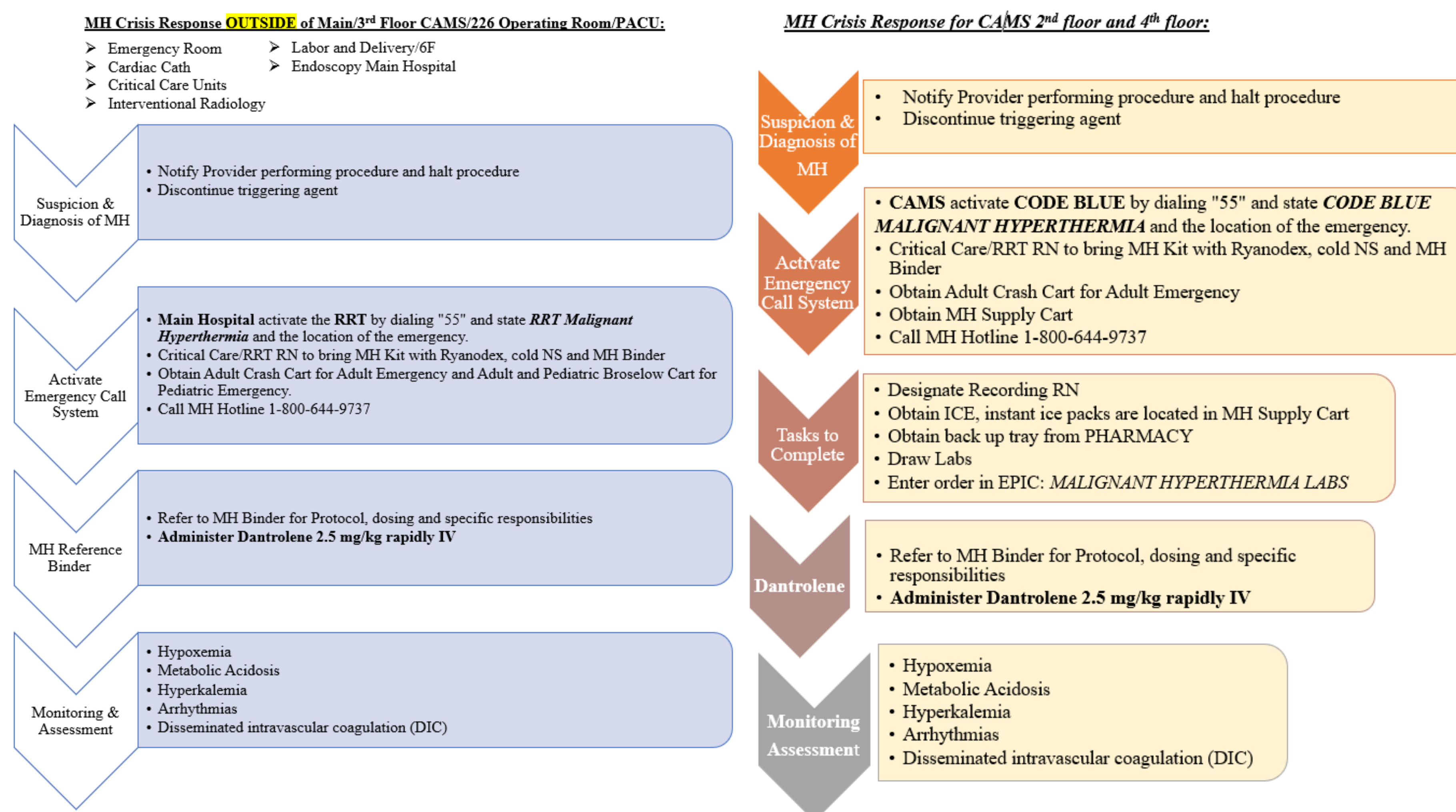
### 2024 Mock Drills Areas of Improvement Identified:

- During RRT or Code Blue “MH” activation responding team were unclear on the meaning of “MH”. Misinterpreted as *maternal hemorrhage* or *imaging*. Resulting in delayed response time.
- 3<sup>rd</sup> Fl. staff reported uncertainty regarding bringing the MH Cart to the location. Nursing staff were actively engaged in patient care, which made it challenging to delegate a team member to transport the cart.
- CAMS 2<sup>nd</sup> & 4<sup>th</sup> Fl. nurses suggested implementing an MH supply cart stocked with IV/lab supplies and instant cold packs to allow the nurses to begin interventions prior to the team’s arrival.

## Protocol Development

- The MH task force members determined that a Rapid Response Team (RRT) would have primary responsibility for MH response.
- The team suggested developing an MH Kit to be stocked in the ICU medication Pyxis. All other medications and supplies could be found in the unit crash carts.
- The kit included three vials of dantrolene sodium and three vials of sterile water.
- An Epic order set for dantrolene sodium administration and the necessary laboratory orders needed were created.
- An MH event algorithm outlining the steps to follow during an MH crisis were developed.

## Final Malignant Hyperthermia Protocol



## Acknowledgement

We extend our gratitude to the Malignant Hyperthermia Interdisciplinary Taskforce at WPH for their collaborative efforts in protocol development, including Nursing Leadership, Anesthesiology, Pharmacy, Clinical Nurse Educators, and Clinical Nurses. We acknowledge their contributions to clinical design, workflow integration, and patient safety preparedness.