

TABLE 1. Suggested Responsibilities by Role During a Malignant Hyperthermia (MH) Drill or Event¹⁻³

Role	Responsibilities
Anesthesia professional	<ul style="list-style-type: none"> ■ Lead the anesthesia team during treatment. ■ Recognize and diagnose MH. ■ Inform the RN circulator to initiate the MH response plan. ■ Discontinue triggering agents and begin treatment of MH. ■ Communicate with the MH Hotline consultant. ■ Communicate with the surgeon about findings, resuscitation, and treatment. ■ Maintain situational awareness (eg, working diagnosis, intended treatment plan, team assignments, periodic status updates) and open lines of communication. ■ Place additional lines or assign a team member to place additional IV or arterial lines as needed. ■ Develop a post-acute treatment plan for the patient after the patient is stabilized. ■ Communicate the transfer-of-care report to the postanesthesia care unit (PACU) RN, critical care team, and receiving hospital team, and possibly travel with the patient to the receiving institution, as needed. ■ Counsel the patient and his or her family members on MH resources available from the Malignant Hyperthermia Association of the United States (MHAUS), and submit an Adverse Medical Reaction to Anesthesia (AMRA) report.
Surgeon	<ul style="list-style-type: none"> ■ Assess the most expeditious surgical plan (eg, close the wound, complete the procedure, modify the procedure). ■ Assist with placement of IV, arterial, and central venous lines if asked. ■ Cool the patient if his or her core temperature is greater than 39° C (102.2° F). <ul style="list-style-type: none"> ■ Lavage open body cavities. ■ Apply ice packs. ■ Order an intensive care unit (ICU) bed for the patient (if not already done).
RN circulator	<ul style="list-style-type: none"> ■ Initiate the MH protocol. ■ Call the MH Hotline and put the call on speakerphone if possible. ■ Call for nursing support/help. ■ Assign duties to others according to the facility's response plan. ■ Begin the documentation and record details of the patient's treatment, including medication dosages, administration times, and the patient's response. ■ Assist the anesthesia professional with placement of additional IV or arterial lines as needed. ■ Assist the anesthesia professional with drawing arterial blood gases and other blood work (eg, arterial blood gas, electrolytes, creatine kinase, coagulation studies). ■ Help initiate and maintain situational awareness (ie, coordinate with the anesthesia professional/team leader). ■ Get any materials that the surgeon needs to irrigate or close the wound, if applicable. ■ Begin planning the patient's transfer to a definitive post-acute treatment area when the patient stabilizes (eg, call for transport, alert PACU/ICU of patient). ■ Assist with patient transport, as needed; provide the transfer-of-care report to the PACU, ICU, and receiving institution. ■ Restock supplies on the MH and emergency carts.
Charge nurse and additional nurses, as available	<ul style="list-style-type: none"> ■ Bring the MH cart, ice, or other supplies (if not already done) and begin to mix and administer the dantrolene sodium. ■ Bring the emergency cart to the OR if it is separate from the MH cart. ■ Prepare and administer additional medications as directed by the anesthesia team leader.

TABLE 1. (continued) Suggested Responsibilities by Role During a Malignant Hyperthermia (MH) Drill or Event¹⁻³

Role	Responsibilities
Anesthesia technician	<ul style="list-style-type: none"> ■ Monitor the patient's core temperature and begin activities to cool the patient if his or her core temperature is greater than 39° C (102.2° F). ■ Refer the patient to the MHAUS web site (http://www.mhaus.org) after the MH event for additional information and resources, if applicable. ■ Respond to a call for help by bringing the MH cart to the site (if not already done). ■ Set up equipment and medications. <ul style="list-style-type: none"> ■ Bring a tray with crushed ice and zipper bags for ice pack preparation. ■ Bring chilled 1-L bags of 0.9% normal saline from the refrigerator to the room. ■ Bring a transport monitor and portable oxygen when the patient is ready for transport and help with transport if needed. ■ Bring the arterial line manifold to the site and prepare to set it up. ■ Assist the anesthesia professional with placing IV, arterial, and central venous lines. ■ Stand ready for other assignments. ■ Help set up monitors in the PACU if needed. ■ Restock anesthesia supplies.
Clinical assistant/runner	<ul style="list-style-type: none"> ■ Obtain additional supplies and ice. ■ Deliver specimens to the laboratory. ■ Check with the team for additional needs, such as retrieving supplies from areas away from the MH site. ■ Obtain an ICU bed if requested.
Front desk personnel and non-medical personnel	<ul style="list-style-type: none"> ■ Restock the ice supply if asked. ■ Call backup personnel for additional help if asked. ■ Perform the duties of the runner as needed.
Pharmacist or pharmacy technician	<ul style="list-style-type: none"> ■ Reconstitute dantrolene sodium. ■ Prepare additional medications as directed. ■ Restock medications on the MH cart.
PACU charge nurse	<ul style="list-style-type: none"> ■ Offer assistance to the OR team. ■ Ensure continuity of care for the patient who has experienced an MH event. ■ Ensure that an MH cart with an adequate stock of dantrolene sodium is immediately available for further treatment. ■ Continue monitoring the patient for signs and symptoms of MH. ■ Record and monitor the patient's temperature and prepare a core temperature probe as directed. ■ Prevent recrudescence by administering 1 mg/kg of dantrolene sodium every 4 to 6 hours or a 0.25 mg/kg/hour infusion. ■ Ensure that an emergency cart and cooling measures, such as crushed ice and zipper bags, are readily available. ■ Confirm that the ICU team is preparing to receive the patient and assist with transporting the patient to the ICU with a hand-off report.
Nurse educator or drill coordinator	<ul style="list-style-type: none"> ■ Schedule the drill with the operative services scheduler, anesthesia professionals, and surgical team members. ■ Recruit volunteers for the drill. ■ Run the drill. ■ Conduct and set the tone for the debriefing session.

(table continued)

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	<ul style="list-style-type: none"> ■ Create a summary of the drill and document the strengths and challenges. ■ Ensure the MH drill site is cleaned of mock materials and the care area is clean. ■ Ensure all MH supplies and the drill medications are removed, and the MH supplies are replaced in storage locations. ■ Ensure that the pharmacist has removed any expired medications or mock drill medications from the MH cart and that it is restocked with MH medications and supplies. ■ Schedule educational sessions. ■ Schedule drill programs.
<p>1. AORN malignant hyperthermia guideline. In: Perioperative Standards and Recommended Practices. Denver, CO: AORN, Inc; 2012:621-641.</p> <p>2. Hommertzheim R, Steinke EE. Malignant hyperthermia—the perioperative nurse's role. AORN J. 2006;83(1):149-164.</p> <p>3. Wong CA, Denholm B. Malignant hyperthermia: diagnosis, treatment, and prevention. CME Zone. http://www.cmezone.com/ce-bin/owa/pkg_disclaimer_.html?ip_company_code=CMEZ&ip_cookie=41050135&ip_test_id=15609&ip_mode=secure. Published 2011. Accessed November 27, 2012.</p>	