Clinical Information (form E)

Please complete the survey below.

Thank you!

INSTRUCTIONS:

1. This form is to be filled out by an anesthesiologist or other health care provider.

2. Complete this form each time you suspect a patient may have experienced an adverse metabolic reaction to anesthesia or exercise, possibly related to malignant hyperthermia (MH). Examples: hypercarbia, acidosis, tachycardia, rigidity, hyperkalemia, myoglobinuria, arrhythmias, unexplained fever.

3. Please fill out as soon as patient is stable, preferably within 48 hours of the event.

4. The attending anesthesiologist or other physician should review the completed CLINICAL INFORMATION survey.

5. If you do not know the patient's name or do not have the consent from the patient, you don't have to fill out the PARTICIPANT INFORMATION surveys. You are allowed to complete merely CLINICAL INFORMATION surveys.

6. If a patient wishes to be registered by name, they may contact the Registry directly by referring his/her case ID of AMRA event.

7. For FULMINANT MH cases refer the patient for a blood test that assesses genetic risk of MH. This may also help diagnose MH susceptibility in other family members.

8. In the case of fatal, fulminant MH, muscle should examined by the autopsy pathologist for genetic defects related to MH and the patient's next of kin should consider calling the MH Registry.

9. Please download the completed form at end of survey for your records.

HEALTHCARE PROVIDER CONTACT INFORMATION
(to be completed by the anesthesiologist/physician/CRNA)

You have completed ... (of Form E - Clinical Information)
10%

E1.1 - Healthcare provider's first name __________________________

E1.2 - Healthcare provider's last name __________________________

E1.3 - Healthcare provider's middle name ________________________
E1.4 - if you are reporting provider, what type of facility?

- Hospital
- Ambulatory Surgical Facility located on hospital campus
- Free-standing ambulatory surgical facility
- Dental Office
- Surgical Office
- Other (specify)

E1.4.1 - If other, please specify

E1.5 - Hospital.facility name:

E1.6 - Is it a VA hospital?

- Yes
- No

E1.7 - Street of provider’s location

E1.8 - City of provider’s location
E1.9 - State/Province of provider's location

- Alabama
- Alaska
- American Samoa
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Guam
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Marshall Islands
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Palau
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon Territory
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1.10 - Zip/Postal Code of provider's location</td>
<td></td>
</tr>
<tr>
<td>E1.11 - Country of provider's location</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>Canada</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
</tr>
<tr>
<td>E1.11.1 - If other, please specify:</td>
<td></td>
</tr>
<tr>
<td>E1.12 - Office phone number</td>
<td></td>
</tr>
<tr>
<td>E1.13 - Email address</td>
<td></td>
</tr>
</tbody>
</table>
| E2.1 - General anesthetic induction method | ☐ inhalation  
|                                          | ☐ intravenous  
|                                          | ☐ not applicable  
|                                          | ☐ other (specify)  

E2.1.1 - If other, please specify: ____________________________________________

| E2.2.1 - Anesthesia induction date | ____________________________________  
|                                  | (for example, 2017-12-25)  

| E2.2.2 - Anesthesia induction time | ____________________________________  
|                                  | (for example, 18:30)  

| E2.3.1 - Anesthesia stop date | ____________________________________  
|                              | (for example, 2017-12-25)  

| E2.3.2 - Anesthesia stop time | ____________________________________  
|                              | (for example, 18:30)  

| E2.4.1 - Duration of anesthetic medication administration (total hours): | ____________________________________  
|                                                                      | (hrs (e.g. 3 hrs))  

| E2.4.2 - Duration of anesthetic medication administration (additional mins): | ____________________________________  
|                                                                            | (mins)  

| E2.5.1 - Total anesthesia duration (total hours): | ____________________________________  
|                                               | (type in hours only (e.g. 2))  

| E2.5.2 - Total anesthesia duration (additional mins): | ____________________________________  
|                                                      | (type in additional minutes only (e.g. 20))  

E2.6 - Type(s) of procedure scheduled?  
( check all applicable )

☐ cardiothoracic with bypass  
☐ cardiothoracic without bypass  
☐ dental  
☐ ear, nose, or throat  
☐ eye  
☐ general surgery  
☐ gynecology  
☐ laparoscopic surgery (specify)  
☐ neurosurgery  
☐ obstetrics  
☐ oral surgery  
☐ orthopedic  
☐ plastic surgery  
☐ radiology  
☐ robot-assisted surgery  
☐ thoracic surgery  
☐ thoracoscopic surgery  
☐ transplant (specify type)  
☐ trauma  
☐ urology  
☐ vascular  
☐ other (specify)  
☐ unknown

E2.6.1 - If laparoscopic surgery, please specify: 
(e.g. abdominal or pelvic, etc.)

E2.6.2 - If transplant, please specify type:

E2.6.3 - If other, please specify:

E2.7 - Was the procedure an emergency?  
☐ Yes  
☐ No
### ADVERSE METABOLIC REACTION TO ANESTHESIA (AMRA)

**You have completed ... (of Form E - Clinical Information)**

50%

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3.1 - Did the Participant experience an Adverse Metabolic Reaction to Anesthesia?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>(enter year only (e.g. 2017))</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3.2.1 - the year that the patient experienced Adverse Metabolic or Muscular Reaction</td>
<td>(enter year only (e.g. 2017))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>(enter month only (e.g. 12))</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3.2.2 - the month that the patient experienced Adverse Metabolic or Muscular Reaction</td>
<td>(enter month only (e.g. 12))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>(enter day only (e.g. 25))</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3.2.3 - the day that the patient experienced Adverse Metabolic or Muscular Reaction</td>
<td>(enter day only (e.g. 25))</td>
</tr>
</tbody>
</table>
### E3.5 - State or Province of patient's residence at time of incident

- Alabama
- Alaska
- American Samoa
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Guam
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Marshall Islands
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Palau
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon
E3.6 - Hospital at time of incident: __________________________

E3.7 - Type of anesthetic prior to AMRA
(check all applicable)

- monitored anesthesia care
- regional anesthesia
- spinal anesthesia
- epidural anesthesia
- general anesthesia without endotracheal intubation
- general anesthesia with endotracheal intubation
- general anesthesia with a face mask
- general anesthesia with a laryngeal mask airway
- tourniquet use

E3.7.1 - If tourniquet used, what's the date and time inflated?
(for example, 2017-12-25 18:30)

E3.7.2 - If tourniquet used, what's the date and time finally released?
(for example, 2017-12-25 18:30)

E3.8 - Did this adverse reaction occur without exposure to anesthetic?

- Yes
- No

E3.8.1 - If yes, please add details:
__________________________________

E3.9 - Was the environment hot when this reaction occurred?

- Yes
- No

E3.9.1 - If yes, how hot?

(C)

E3.10 - Was any infection present at the time of this reaction?

- Yes
- No
- Unknown

E3.10.1 - If infection was present, what organisms were known to be present? (specify)
__________________________________

E3.11 - Where was the reaction noted to occur?

- pre-operative holding area
- in the operating room
- in the intensive care unit
- in a remote location (e.g. GI suite, radiology)
- in the post-anesthesia care unit
- other (specify)
(check one)

E3.11.1 - If other, please specify:
__________________________________
E3.12 - After adverse metabolic or muscular reaction was noted, the procedure was:

- deferred
- terminated before all scheduled procedures completed
- completed in spite of reaction
- not applicable - patient was in transport at time reaction occurred
- not applicable - patient in recovery or intensive care area at time of reaction
### CLINICAL IMPRESSION

You have completed ... (of Form E - Clinical Information)

70%

E4.1.1 - Patient experienced (opinion of attending anesthesiologist):
(check one)

- ○ adverse metabolic reaction that was not related to MH
- ○ possible MH - may include masseter spasm (MH diagnostic center referral recommended)
- ○ fulminant MH - (family counseling, MH diagnostic center referral recommended)
- ○ other (specify)

E4.1.1 - If other, please specify
__________________________________

E4.2.1 - MH DIAGNOSTIC CENTER DIRECTORY

#### University of Minnesota
Paul A. Iaizzo, PhD, FHRS
420 Delaware St. SE
B172 Mayo, MMC 195
Minneapolis, MN 55455
Tel: 612-624-7912 (Dr. Iaizzo)
Email: iaizz001@umn.edu

#### UC Davis MH Biopsy Testing Center
Timothy Tautz, MD, Director
UCDMC Department of Anesthesiology
4150 V St.
PSSB Suite 1200
Sacramento, CA 95817
Tel: 916-734-2432
Email: tjtautz@ucdavis.edu

#### Uniformed Services University of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814
LCDR Michael Lee, MC USN
CAPT Dale F. Szpisjak MC, USN (back up)
Tel: 301-295-3140
Email: MHLab@usuhs.edu

#### Toronto General Hospital
Sheila Riazi, MSc, MD, FRCPC
Department of Anesthesia/Pain Mgmt
University Health Network
2 Elizabeth Street, Room E3-323
Toronto, ON M5G 2C4
Canada
Tel: 416-340-3128
Email: Sheila.riazi@uhn.ca

#### Wake Forest Baptist Medical Center
Joseph Tobin, MD
E4.3 - If referred to a MH diagnostic center, please select which one:

- Wake Forest Baptist Medical Center (Winston-Salem, NC)
- Uniformed Services University of the Health Sciences (Bethesda, MD)
- UC Davis MH Biopsy Testing Center (Davis, CA)
- University of Minnesota (Minneapolis, MN)
- Toronto General Hospital (Toronto, ON)

E4.4 - Were the patient and the family also referred to MHAUS?

- Yes
- No

E4.5 - COMMENTS ON PATIENT (Optional):

__________________________________________

Congratulations. You have completed ... (of Form E - Clinical Information) 100%