Guidelines Regarding the Role of the Certified Registered Nurse Anesthetist in Mass Casualty Incident Preparedness and Response

A mass casualty incident (MCI) occurs when the number of patients overwhelms a healthcare management system, thereby presenting challenges of resource allocation in a community. Even when resources are available, catastrophic events can intensely impact the anesthesia workload. MCIs may be triggered by naturally occurring pandemics, devastating geological events, and large-scale or local community catastrophes. Recent world events have prompted new planning and training to address the increasing concern for bioterrorism and the use of weapons of mass destruction.

The American Association of Nurse Anesthetists (AANA) recognizes the importance of providing safe anesthesia care at all times and the vital role that Certified Registered Nurse Anesthetists (CRNAs) play in the planning for an MCI and provision of care during an MCI. Activation of MCI plans often presents difficult and ethically challenging decisions regarding resource allocation, requiring sound judgment, critical-thinking, and leadership skills. The purpose of these guidelines is to detail the capacities in which a CRNA may serve throughout the MCI disaster management phases (mitigation, preparedness, response, and recovery) based on the CRNA’s anesthesia education, training and expertise.

Anesthesia Disaster Management and Leadership
Anesthesia education, training, and clinical practice uniquely prepare a CRNA to be an autonomous member of the MCI preparation and response team. CRNAs possess specialized knowledge of incident awareness and “non-medical aspects of high-performance team behaviors.” These qualifications demonstrate a CRNA’s ability to contribute at high levels to the development of emergency preparedness programs, standard operating procedures, and interdisciplinary team communication processes to efficiently allocate resources and provide care during an MCI.

CRNAs are able to provide comprehensive anesthesia services for diverse patient populations during an MCI. Expertise in rapid systems assessment, vascular volume resuscitation, airway management, general and regional anesthesia and pain management, team coordination, and resource management contribute to a CRNA’s ability to treat and manage patients during an MCI. A CRNA has expertise in management of various forms of trauma by integrating practice experience and an “understanding of the detailed physiology and pharmacology of the respiratory, cardiac, and nervous systems.”

Considerations for Anesthesia MCI Preparedness and Response
To provide anesthesia care in this challenging and unfamiliar environment presented by an MCI, whenever possible, CRNAs should prepare for their role with the MCI team by participating in training activities for the four disaster management phases.
### Disaster Management Phases

<table>
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<tr>
<th>Phase</th>
<th>Description</th>
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<tr>
<td>Mitigation</td>
<td>Development of the plan to reduce the impact of future MCIs.</td>
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<tr>
<td>Preparedness</td>
<td>Development of plans and activities to strengthen the ability to respond to a MCI.</td>
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<tr>
<td>Response</td>
<td>Acute care is provided to preserve life immediately following an MCI.</td>
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<tr>
<td>Recovery</td>
<td>Reestablishment of the community and instilling a sense of normalcy into the lives of the survivors.</td>
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#### Mitigation and Preparedness Phases

- **Training**: Participate in MCI-related training activities, such as disaster planning, tabletop exercises, mock drills, and actual events within their institutions and communities.\(^{12,20,24,27,28}\)
- **Program Development**: Conduct MCI literature review, disseminate findings, and attend MCI-related conferences to build and strengthen community, national and international learning and collaboration.\(^{20}\)

#### Response and Recovery Phases

- **Leadership**: Serve in positions of leadership, which could include duties such as functioning as a surgical team member in collaboration with the surgeon and operating department professional to ensure the swift transition of patients from admission to the operating room, the intensive care unit, or the morgue.\(^3\)
- **Safe Practice**: Adhere to AANA Infection Control Guidelines for Certified Registered Nurse Anesthetists, universal precautions and emergency specific (e.g. viral, radiation) self-protection measures to optimize patient outcomes as the patient status permits.
- **Early Analgesia**: Consider administering early analgesia at the site of the emergency for trauma cases as appropriate and allowed by facility policy and state and federal laws and regulations.\(^{25}\)
- **Emergent Airway Management**: Consider risk of pulmonary aspiration of gastric contents, foreign object and cervical spine status if securing the patient’s airway.\(^{25}\)
- **Ethical Considerations**: Working as a member of the MCI team to triage patients and resources, reference the AANA Code of Ethics for the Certified Registered Nurse Anesthetist when considering ethically related decisions.\(^{10,11,26}\)

CRNAs are encouraged to preserve the integrity and safety of patients, team members, and themselves despite any resource limitations and the emergency environment.\(^{10,12-14,20}\)

#### Community and Institutional Preparedness and Response

Community and institutional participation in MCI planning, emergency and disaster preparedness simulations, and training is fundamental to an effective community- wide MCI response.\(^{9,15,18,23,27-31}\) Research demonstrates that community-wide, periodic mass casualty emergency and disaster preparedness training improves a healthcare providers’ confidence in responding to an MCI.\(^{20}\)

An essential component of an effective community response includes healthcare facility cooperation and systems preparedness. The Joint Commission requires accredited hospitals and ambulatory care organizations to have an established emergency management plan that is
tested biannually to identify opportunities for improvement. The emergency management requirement for hospitals includes a mandate for community participation in at least one of the annual hospital drills. The community response team includes emergency medical services, fire and police departments, the public health department, local municipalities and government authorities, local hospitals, and other healthcare organizations.

Summary
Delivery of optimal care for severely injured casualties in the controlled chaos of the unfamiliar MCI environment requires responders to have a comprehensive plan, high-level training and skills to respond to the event and to support each other to deliver optimal care for each casualty. The team should debrief together both the event and their personal emotional response as part of the MCI recovery and quality improvement process. Anesthesia professionals possess the clinical and team leadership experience to serve as members of the leadership team of the MCI. Effective preparation and management of the MCI depends on a coordinated, multi-responder team response. The team of responders must be familiar with their community and facility initiatives through detailed planning, education, and regular rehearsal to provide triage, treatment, and patient safety.

Resources

- Online training modules and nursing curriculum for emergency preparedness offered through the Nursing Emergency Preparedness Education Coalition available at: http://nnepi.gwnursing.org/.
- Additional online disaster preparedness nursing modules available through the National Nurse Emergency Preparedness Initiative available at:
- Emergency Nurses Association provides the all-hazards position statement on emergency preparedness and is available at: http://www.ena.org/SiteCollectionDocuments/Position%20Statements/AllHazards.pdf.
- The Centers for Public Health Preparedness Resource Center offers comprehensive educational resources on disaster preparedness, including web casts, exercise/drill/tabletop manuals, comprehensive course outlines, and more available at: http://preparedness.asph.org/perlc/resourcereports.cfm.

References


In October 2002, the AANA Board of Directors adopted Advisory Opinion Number 5.3 (AO 5.3), Mass Casualty Incident Preparedness and the Role of the Certified Registered Nurse Anesthetist. In August 2011, the AANA Board of Directors renamed and numbered AO 5.3 as Position Statement Number 2.16, Role of the Certified Registered Nurse Anesthetist in Mass Casualty Incident Preparedness and Response. In April 2014, the AANA Board of Directors archived this position statement and adopted the Guidelines Regarding the Role of the Certified Registered Nurse Anesthetists in Mass Casualty Incident Preparedness and Response.

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