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**OVERSIGHT AND MONITORING OF CARDIOPULMONARY RESUSCITATIVE
EVENTS AND FACILITY CARDIOPULMONARY RESUCITATION COMMITTEES**

1. PURPOSE: This Veterans Health Administration (VHA) Directive provides policy to ensure that each facility has an established Cardiopulmonary Resuscitation Committee (CRC) or equivalent that fully reviews each episode of care where resuscitation was attempted both on an individual basis and in the aggregate, for the purpose of identifying problems, analyzing trends, and benchmarking for identifying opportunities to improve both process and outcomes. It is the explicit charge of the CRC to recommend specific actions when problems are determined and ensure those actions are implemented.

2. BACKGROUND: Effectively applied, cardiopulmonary resuscitation (CPR) can be a lifesaving process for the individual who suffers a cardiopulmonary arrest. When performed correctly and in a timely manner, CPR is clearly proven to exert a significant survival benefit.

a. Ongoing review and analysis of high-risk health care processes and the remediation of identified problems are essential underpinnings for ensuring patient safety and the provision of high-quality care. For instance, the 2007 American Heart Association's (AHA) updated guidelines for CPR placed increased emphasis on the importance of effective chest compressions for maintaining coronary artery perfusion pressure thus enhancing survival. However, studies of in-hospital performance of resuscitation practices have demonstrated poor retention of CPR skills, supporting the need for periodic (re)training in both Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS). Likewise, the VHA National Center for Patient Safety (NCPS) identified successful airway management as a weak link in the chain of resuscitation processes, which led to the development of the current VHA Airway Management Policy. Additionally, there is evidence that CPR is frequently performed sub-optimally in hospital settings, and that sub-optimal CPR correlates with lower survival rates.

b. It is essential that all VHA facilities have in place methodologies to perform resuscitation when needed; monitor the effectiveness of the process, including specific goals; identify existing or potential problems; and improve overall outcomes.

c. Performance measurement regarding "resuscitation and its outcomes" is a requirement (PI 1.10) of The Joint Commission. Data must be aggregated, analyzed, compared internally over time and externally with other sources of information when available (benchmarking), and used to identify and implement desired changes.

d. Standardized collection and reporting of data, methodologies for tracking outcomes, and systems for both internal and external benchmarking are needed in order to both codify and improve the outcomes from in-hospital cardiopulmonary arrest across the VHA network.

e. A diverse range of responses to cardiopulmonary arrests is occurring across VHA facilities due to variations in capability, both in resources and levels of expertise. For example,

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an administrative unit (e.g., VA Central Office, Veterans Integrated Service Network (VISN)) could at best respond with activation of 911 then bystander CPR and Automated External Defibrillator (AED) pending arrival of Emergency Medical Service (EMS), while most tertiary care centers could provide rapid, aggressive resuscitation and (if needed) direct transfer to the catheterization laboratory, including mechanical cardiopulmonary support. It is vital that all facilities develop local policies and procedures regarding the management of cardiopulmonary arrest that are specific and appropriate to their mission and capabilities.

f. While optimizing the CPR processes is important for survival, it must always be remembered that prevention of in-hospital cardiac arrests may have the greatest impact on mortality. It has been suggested that almost half of all patients who die in acute-care hospitals (without a “do not resuscitate” {DNR} order) have serious, yet potentially reversible, abnormalities in their vital signs in the 24 hours before death. Implementation of an organized system for recognizing and rapidly responding to a potential emergency for a hospitalized patient is a possible mechanism to reduce the number of in-hospital cardiopulmonary arrests.

g. **Definitions**

(1) **Cardiopulmonary Arrest.** Cardiopulmonary arrest is the loss of airway, spontaneous breathing, or meaningful circulation.

(2) **Cardiopulmonary Resuscitation (CPR).** CPR is the use of therapeutic interventions, including BLS and ACLS, which are designed to restore spontaneous circulation following cardiac or respiratory arrest.

(3) **Non-Resuscitation Code.** "Non-Resuscitation Code" is the term applied when there is activation of the hospital-wide code system for certain activities that are not to be considered cardiopulmonary arrests, i.e., do not require initiation of BLS or ACLS protocols. These codes may include cardiac events such as: successful implantable cardiac defibrillator firing for Ventricular Fibrillation (VF) or Ventricular Tachycardia (VT), or chemical only-codes in the case of a modified DNR status allowing only drugs without chest compression or defibrillation during the event. Non-resuscitation codes more generally involve non-cardiac events such as: vaso-vagal episodes, fainting spells, seizures, etc; and calls for security help, or any variety of other calls that precipitate (appropriately or inappropriately) a call for an emergency response.

(4) **Survived Event.** "Survived Event" means a sustained return of spontaneous circulation (ROSC) for at least 20 minutes, which is the measure of initial CPR success. It is defined as the restoration of a spontaneous rhythm that results in adequate perfusion (more than an occasional gasp, fleeting palpated pulse, or arterial waveform). Signs of ROSC include: breathing, coughing, movement, and evidence of a palpable pulse, including a measurable blood pressure. Assisted circulation (e.g., mechanical support such as extracorporeal membrane oxygenation) is not to be considered ROSC until “patient-generated” (i.e., spontaneous) circulation is established.

(5) **Survival to Hospital Discharge.** "Survival to Hospital Discharge" is the point at which the patient is discharged from the acute hospital stay regardless of neurological status, outcome, or destination. This may include discharge to inpatient extended care units (e.g., Rehabilitation, Community Living centers (CLCs)).

3. POLICY: It is VHA policy that each VHA facility have an established Cardiopulmonary Resuscitative Committee (CRC) or equivalent that reviews each episode of resuscitative care under the facility's area of responsibility, and that such events and their outcomes are recorded, reported, and undergo routine evaluation for appropriateness, process, and outcomes in the context as part of the facility's continuous quality improvement program.

4. ACTION

a. **Principal Deputy Under Secretary for Health and Associate Deputy Under Secretary for Health for Quality and Safety.** The Principal Deputy Under Secretary for Health and the Associate Deputy Under Secretary for Health for Quality and Safety are responsible for ensuring that processes and policies for monitoring outcomes and process improvement related to CPR are in place and effective.

b. **Office of Patient Care Services (PCS) and National Program Manager for Cardiology.** The Office of PCS and the National Program Manager for Cardiology are responsible for:

(1) Providing national guidance and oversight for clinical programs and policy related to the monitoring and improvement of processes and outcomes related to cardiopulmonary resuscitation.

(2) Reviewing trends and issues reported by the Office of Quality and Performance (OQP), the Office of Patient Safety, and the Deputy Under Secretary for Health for Operations and Management to identify emerging trends.

(3) Reviewing changes in recommendations made by the professional societies and oversight organizations concerning the performance standards for cardiopulmonary resuscitation, taking action as appropriate.

(4) Identifying action plans from the national level, when data analysis reflects opportunities for improvement, and referring them to the Under Secretary's Coordinating Committee for Quality and Safety (USCCQS). **NOTE:** *This information is communicated to Under Secretary for Health, and USCCQS through PCS and by the Deputy Under Secretary for Health for Operations and Management to VA medical centers, and VISN leadership.*

c. **Chief Quality and Performance Officer and Chief Patient Safety Officer.** The Chief Quality and Performance Officer and the Chief Patient Safety Officer are responsible for:

(1) Monitoring and analyzing trends and issues related to CPR events in VA facilities, including instances of Non-Resuscitative Codes.

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(2) Notifying the National Program Manager for Cardiology, when concerns, trends, or quality issues are identified in the performance of CPR events.

(3) Consulting with the National Program Manager Cardiology and the representative(s) of the Deputy Under Secretary for Health for Operations and Management in the development of VHA Patient Safety Alerts relevant to CPR.

d. **Chief Patient Safety Officer.** The Chief Officer for Patient Safety is responsible for bringing all findings from the VHA Patient Safety Information System that are relevant to the prevention of adverse events in CPR to the attention of the National Program Manager for Cardiology and the Chief Patient Care Services Officer.

e. **Under Secretary's Coordinating Committee for Quality and Safety (USCCQS).** The USCCQS will regularly review data and recommendations on the processes and outcomes of CPR presented by the National Program Manager for Cardiology. In consultation with the National Program Manager for Cardiology, the committee will make recommendations to the Under Secretary for Health.

f. **Office of the Deputy Under Secretary for Health for Operations and Management .** The Office of the Deputy Under Secretary for Health for Operations and Management is responsible for:

(1) Conducting initial review and analysis on CPR reports from the VISNs and forwarding quarterly to OQP and the VHA National Program Manager for Cardiology for in depth review, analysis and recommendations.

(2) Collaborating with VHA Program Offices to ensure that concerns, trends, and quality issues identified are communicated to VA medical centers and VISN leadership

g. **VISN Directors and Chief Medical Officers.** VISN Directors and Chief Medical Officers are responsible for ensuring that:

(1) Facilities under their purview provide appropriate resuscitative care and report data and have policies and procedures in place to monitor and improve quality and outcomes related to CPR;

(2) Staff follow national standards and ensure CPR data submitted from their facilities are reviewed and analyzed for trends and opportunities for improvement; and

(3) Data findings are submitted as required.

h. **VISN Quality Management Officer.** The VISN Quality Management Officer is responsible for:

(1) Tracking and trending reports forwarded by each facility CRC or equivalent committee related to cardiopulmonary events; and

(2) Reporting any concerns, trends, or quality issues through appropriate channels to the VISN Network Director and VISN Chief Medical Officer.

i. **Facility Director.** The facility Director, or appropriate designee (i.e., Chief of Staff, Chief Nurse Executive) is responsible for:

(1) Ensuring that the level of support services provided is appropriate and sufficient so that resuscitation needs can be delivered in a timely and quality fashion by proper budgetary support to accomplish the goals outlined in the directive.

(2) Determining to what level resuscitative services are to be provided for all areas of the facility and grounds.

(3) Establishing when an internal code system needs to be activated or when activation of 911, followed by initiation of bystander CPR and AED, is most appropriate.

(4) Ensuring that local policy explicitly states where a victim is to be transported to following a cardiac arrest, including the method for transportation in any given scenario.

(5) Providing an infrastructure in place to ensure that:

(a) Equipment necessary for resuscitation of patients suffering a cardiopulmonary arrest is available when and where needed;

(b) Equipment is functioning optimally and subject to a rigorous maintenance schedule as detailed in the facility's resuscitation policy;

(c) Proper training of personnel has occurred and such training is monitored in a manner consistent with the standards set forth in the CPR Training Directive (VHA Directive 2008-008);

(d) Appropriately trained personnel are available at all times should resuscitation be required; and

(e) Documentation in the patient's electronic medical record related to the code includes a complete list of all treatments and medications administered, the patient's response to those treatments and medications, patient outcome, and the final disposition or transfer, if applicable.

(6) Establishing ongoing relationships with local and regional EMS providers. Because EMS may, in certain circumstances, be involved in either resuscitation, transport, or both, this needs to include agreements covering emergency responses on VHA campuses, as well as transportation within, into, and out of the VHA facility or campus.

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(7) Having a policy mandating the membership and responsibilities of a CRC or equivalent, which is responsible for the quality of, and improving the management of all processes related to cardiopulmonary arrest occurring at the facility. Specific areas that must be addressed within the CRC policy include:

(a) Reviewing each episode of care where resuscitation was attempted both on an individual basis and in aggregate, for the purpose of identifying problems, analyzing trends, and benchmarking for opportunities for improvement, and when problems are determined, to recommend specific actions and ensure those actions are implemented.

(b) Ensuring there is multidisciplinary representation on the CRC from all areas of the facility involved in performing CPR or maintaining equipment and supplies, including Critical Care, Inpatient Units, Outpatient Units, Community-based Outpatient Clinics, or any setting where CPR may be provided, as well as engineering, supply processing and distribution, pharmacy, etc.

(c) Outlining a process for what and how data is collected, reported and analyzed, and for documenting the review of those events, including recommendations and follow up to ensure that any recommendation has been fully implemented. Each event should be tracked, trended, and benchmarked both internally and externally against recognized national standards and best practices. Each CPR event must be reviewed for the presence of:

1. Errors or deficiencies in technique or procedures,
2. Lack of availability or malfunction of equipment,
3. Appropriateness of interventions performed against national standards of care,
4. Clinical issues or patient care issues such as failure to rescue, which may have contributed to the occurrence of a cardiopulmonary event, and
5. Delays in initiating CPR both in house, and problems in obtaining the assistance of Emergency Medical Services or use of the 911 call system when the event occurs on campus.

(d) Performing an annual review of all facility policies related to the training of staff and performance of CPR at the facility, ensuring that policies are updated, as needed, or as new guidance is received, and for ensuring that all changes and new policies are communicated effectively to all staff members of the facility.

j. **Facility Quality Manager.** The facility Quality Manager serves as a member of the CRC or equivalent, and is responsible for:

(1) Ensuring a complete review of each CPR event (as defined in this Directive) in order to determine that all standards of care have been met and that local policies have been followed.

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(2) Providing information to the VA medical center Chief of Staff and VISN Quality Management Officer.

5. REFERENCES

a. Performance Measurement in Healthcare. Joint Commission on Accreditation of Healthcare Organizations (JCAHO). (<http://www.jcaho.org/pms/index.htm>) June 30, 2005.

b. http://www1.va.gov/vhapublications/ViewPublication.asp?pub_ID=1292

c. Ian Jacobs and Vinay Nadkarni (Co-Chairs), ILCOR Task Force on Cardiac Arrest and Cardiopulmonary Resuscitation Outcomes. Cardiac arrest and cardiopulmonary resuscitation outcome reports: Update and Simplification of the Utstein Templates for Resuscitation Registries: A Statement for Healthcare Professionals from a Task Force of the International Liaison Committee on Resuscitation (ILCOR). Circulation. 2004; 110 (21):3385-97.

d. Peberdy MA, Kaye W, Ornato JP, et al. Cardiopulmonary resuscitation of adults in the hospital: A report of 14,270 cardiac arrests from the National Registry of Cardiopulmonary Resuscitation. Resuscitation. 2003;58:297-308.

6. FOLLOW-UP RESPONSIBILITY: The Office of Patient Care Services (11) is responsible for the contents of this Directive. Questions may be referred to the National Program Director for Cardiology at (202) 461-7120.

7. RESCISSIONS: None. This VHA Directive expires October 31, 2013.

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