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OUT OF OPERATING ROOM AIRWAY MANAGEMENT

1. PURPOSE: This Veterans Health Administration (VHA) Directive addresses the appropriate competencies of providers who perform urgent and emergent airway management outside of VHA facility operating rooms; it addresses required techniques to confirm successful endotracheal tube placement and required documentation when a patient has been determined to have a difficult-to-intubate airway. **AUTHORITY:** Title 38 United States Code 7301(b).

2. BACKGROUND

a. Urgent and emergent airway management is often required outside of an operating room. It is critical that appropriate individuals who respond to the airway management needs of the patient are trained and qualified to perform airway management. Competence in airway management must be demonstrated and cannot be assumed based solely on job title, which includes physicians.

b. Failure to recognize esophageal intubation can have disastrous results. Analysis of the medical literature and root cause analyses (RCAs) confirm that brain damage or death may occur due to unrecognized esophageal intubation or other failure to intubate the trachea and appropriately ventilate the patient.

c. Use of devices to confirm endotracheal tube placement in concert with clinical techniques, such as auscultation, is supported by the American College of Emergency Physicians, the American Society of Anesthesiologists, the National Association of Emergency Medical Service (EMS) Physicians, and the 2010 American Heart Association's (AHA) Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Inexpensive and effective devices can confirm endotracheal tube placement when used properly and combined with auscultation. Examples are portable capnography or colorimetric devices that detect exhaled Carbon Dioxide (CO₂), as well as esophageal detection devices (EDD) including esophageal bulbs and syringes.

d. The use of portable capnography is strongly recommended due to the limitations of colorimetric and EDD devices. Colorimetric End-Tidal Carbon Dioxide (ETCO₂) detectors may provide a false indication of esophageal intubation in cardiac arrest patients because of poor systemic perfusion that delivers little CO₂ to the lungs for exchange, or in cases of florid pulmonary edema. EDD may provide a false reading of esophageal intubation in obese patients or those with copious pulmonary secretions.

e. For some patients, airway management, including insertion of an endotracheal tube in their airway, may be predicted to be difficult due to prior patient experience, history, or observed anatomic and situational contexts. The use of a standardized critical path analysis tool is

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recommended to help determine when additional expertise needs to be consulted. Additionally, clear and timely documentation in the patient's record and communication of this information to the patient and other health care professionals can prevent future problems.

f. Definitions

(1) **Urgent Airway Management.** Urgent airway management is management of the airway in a patient whose respiratory status is deteriorating and in need of support and eventual intervention (e.g., in need of airway assistance and/or eventual intubation or anticipated respiratory distress).

(2) **Emergent Airway Management.** Emergent airway management is management of the airway in a patient who needs immediate support and intervention (e.g., a code situation).

3. POLICY: It is VHA policy that unless exempt, each facility must have a written policy in place no later than October 31, 2013, regarding out-of-operating-room airway management and a process for ensuring the competency of staff performing this task in responding to respiratory compromise events, including cardiopulmonary arrest, during all hours when patient care is provided.

4. ACTION

a. **Veterans Integrated Service Network (VISN) Director.** Each VISN Director is responsible for ensuring:

(1) Each VISN facility, unless exempt, has a local out-of-operating-room airway management policy in place no later than October 31, 2013.

(2) The specifics of the local policy are individualized and reflect the process at the facility in addition to the standard requirements of this Directive.

(3) Surveying all VISN facilities to ensure that any facilities that are exempt per this Directive have adequate arrangements in place to ensure timely 911 Emergency Medical Services (911 EMS) response when required.

(a) Exempted facilities or components of facilities are those at which the sole response to respiratory compromise events is to call outside 911 EMS while utilizing Basic Life Support (BLS) trained staff to care for the patient until relieved by 911 EMS.

1. Staff are to use only those techniques approved as part of BLS training.

2. Arrangements for coverage by 911 EMS must be in place in advance.

(b) Exempt facilities may not include a facility at which any staff are privileged for moderate sedation or deeper levels of sedation care.

NOTE: An example of facility-level policy can be found at the Web site of the National Center for Patient Safety at: <http://vaww.ncps.med.va.gov> in the Guidelines and Directives section. This is an internal Department of Veterans Affairs (VA) Web site not available to the public.

b. **Facility Director.** Each Facility Director is responsible for ensuring

(1) The required local policy for out-of-operating-room airway management is published no later than October 31, 2013, containing, at a minimum, a thoroughly defined process for confirming the competence of those who perform airway management.

(a) Advanced Cardiac Life Support (ACLS) certification, alone, does not fulfill this requirement.

(b) The decision on how to incorporate this information into setting specific clinical privileges or a scope of practice is made at the local facility level in accordance with current VHA policy and accreditation standards.

(2) In addition, the local policy must, at a minimum:

(a) Assign responsibility to the Chief of Staff, or subject matter expert designee, for:

1. Developing the subject matter content and process for assessing and establishing competency for clinicians performing out-of-operating-room airway management. The facility's Chief of Anesthesia or equivalent would be a preferred subject matter expert.

2. Assessing the competency of those seeking out-of-operating-room airway management privileges or scope of practice. Training of all providers is not required; however, the facility must have a sufficient number of providers deemed competent in Airway Management according to the requirements of this Directive to respond to respiratory compromise events, including cardiopulmonary arrest, during all hours when patient care is provided.

a. The training for and assessment of competency must include the cognitive skills and procedural skills defined in Attachment A.

b. As an alternative for new employees, transfers in from other VA Medical Centers, consultants or without compensation clinicians, competency may be established through VA review of alternative documentation as defined in Attachment A and Attachment B plus a period of Focused Professional Practice Evaluation.

(b) Require that continued competency be demonstrated at the time of reappraisal of privileges or reappraisal of a Scope of Practice. Continued competency must include the demonstration of airway management skill over the prior time period as well as current cognitive understanding of airway management and intubation requirements as outlined in Attachment A. Continued competency over time may be documented in the Ongoing Professional Practice Evaluation. For anesthesia professionals, a review of airway management and intubation skills as demonstrated daily in the Operating Room or procedural setting and reflected in the

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individual's competencies or Ongoing Professional Practice Evaluation may be used to determine competency.

(c) Require that highly portable videolaryngoscopes are immediately available at all times for use by clinicians for out-of-operating-room airway management. The use of videolaryngoscopes has been shown to improve patient safety by making the training in intubation skills easier and by increasing the likelihood of successful tracheal intubation during urgent or emergent airway situations. The facility Chief of Staff needs to consider Reusable Medical Equipment requirements and how they affect availability of videolaryngoscopes to determine the desirable quantity to ensure access for patient care. Appropriate training in the use of videolaryngoscopes must be provided.

(d) Require the use of a device or devices to confirm endotracheal tube placement in concert with auscultation. Auscultation alone is not sufficient evidence of correct placement. Devices that can confirm the tube placement (e.g., portable capnography, esophageal bulbs, syringes, or colorimetric devices) must be used in conjunction with auscultation of breath sounds in all cases of airway management. Portable quantitative waveform capnography is strongly recommended in all circumstances, especially when an alternative airway device is inserted (laryngeal mask airway (LMA), combitube, etc.) to confirm ventilation. The use of devices to confirm endotracheal tube placement does not supersede or preclude other aspects of appropriate care, such as the use of X-ray imaging to verify the position of the tip of the endotracheal tube.

(e) Require that resident staff or other clinical trainees perform endotracheal intubation and airway management under supervision as required by VHA Handbook 1400.1, Resident Supervision. See subparagraph 4b(2)(h) regarding clinical trainees performing intubations in an emergency situation.

(f) Include provisions for out-of-operating-room airway management that reflect the specific practice settings and circumstances of that facility, including an assessment of the number and type of clinical staff whose expected duties would include endotracheal intubation and airway management in a non-operating room setting. The skills needed in airway management may involve bag and mask ventilation, oral or nasopharyngeal airway, tracheal intubation, adjunct airway appliance insertion (LMA, combitube, etc.) or a surgical airway.

(g) Include sections addressing the following out-of-operating-room situations:

1. A plan for managing the known or emergently identified difficult airway, including who will provide backup expertise when a difficult airway is encountered (an example may be found at the National Center for Patient Safety Web site at <http://vaww.ncps.med.va.gov> . **NOTE:** *This is an internal VA Web site not available to the public.*

2. A process for notifying the patient that they are considered a “difficult airway” and a process for including specifics regarding difficulty in managing the airway in the patient’s posting (see Att. C) and problem list for future rapid identification. Anesthesia providers will be designated as the clinicians responsible for determining if the patient has a difficult airway.

NOTE: Airway management within the Operating Room is excluded from this Directive. However, when the anesthesia professional encounters a difficult airway in the Operating Room or during the pre-operative process the anesthesia professional must comply with subparagraph 4b(2)(g)2 regarding disclosing the issue to the patient and documenting this information for future providers.

(h) Include a statement that in extraordinary circumstances, where an individual with the demonstrated competency in airway management per the requirements of this Directive is not available, clinicians, including clinical trainees, may exercise their judgment as to the appropriate response with the overarching goal being the care and safety of the patient. If this situation should occur, the facility Chief of Staff, or designee, must conduct a RCA as to why this vulnerability existed and initiate appropriate system fixes to minimize a repeat occurrence.

5. REFERENCES

- a. VHA Handbook 1101.04, Medical Officer of the Day.
<http://www.va.gov/vhapublications/index.cfm>
- b. American Heart Association, "2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care," Part 8, Adult Advanced Cardiovascular Life Support, 2010.
- c. American College of Emergency Physicians, Policy #400307, Verification of Endotracheal Tube Placement, Approved April 2009. <http://www.acep.org/Clinical---Practice-Management/Verification-of-Endotracheal-Tube-Placement/>
- d. American Society of Anesthesiologists, Practice Guidelines for Management of the Difficult Airway, *Anesthesiology*. 98:5, May 2003.
<http://www.asahq.org/For-Members/Practice-Management/Practice-Parameters.aspx>
- e. Bishop M. J., Michalowski P., et al. "Recertification of Respiratory Therapists' Intubation Skills One Year After Initial Training: An Analysis of Skill Retention and Retraining," *Respiratory Care*. 46(3): 234-237, 2001.
- f. VHA Handbook 1100.19, Credentialing and Privileging.
<http://www.va.gov/vhapublications/index.cfm>
- g. VHA Handbook 1400.1, Resident Supervision.
<http://www.va.gov/vhapublications/index.cfm>
- h. National Center for Patient Safety Web site at <http://vaww.ncps.med.va.gov> in the Guidelines and Directives section. *NOTE: This is an internal VA Web site not available to the public.*

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6. FOLLOW-UP RESPONSIBILITIES: The Office of Patient Care Services (10P4) is responsible for the content of this Directive. Questions may be addressed to the Office of Specialty Care Services, National Director of Anesthesia at 202-461-7120.

7. RESCISSION: VHA Directive 2005-031 is rescinded. This VHA Directive expires October 31, 2017.

Robert A. Petzel, M.D.
Under Secretary for Health

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ATTACHMENT A

COMPETENCY ASSESSMENT

1. The facility Chief of Staff, or subject matter expert designee, is responsible for assessing and establishing competency for clinicians performing out-of-operating-room airway management. *NOTE: The facility's Chief of Anesthesia or equivalent would be a preferred subject matter expert.* The competency assessment must include the development of specific subject matter content and the provision of opportunities for the acquisition and demonstration of the necessary procedural skills.
2. If there is no provider at the Department of Veterans Affairs (VA) facility who is appropriately qualified to conduct the assessments, consider partnering with another facility to oversee the competency assessments and training of staff, or relying upon another co-located facility or community response for airway management.
3. The use of videolaryngoscopy has been shown to shorten the training and improve the success rate of endotracheal intubation. It is required that this equipment be immediately available on a 24 –hours-a-day, 7-days-a-week (24/7) basis.
4. In-house airway management coverage by staff deemed competent according to this Directive is required 24/7. For example, facilities have used appropriately qualified emergency room physicians, respiratory therapists, nurses, pulmonologists, and critical care physicians among others to provide out-of-operating-room airway management. The professional job title should not rule out certain groups of clinicians for consideration. If an anesthesia professional is not in-house 24/7, then properly trained Respiratory Therapists with documented airway management competencies would be the preferred responder for airway issues.
5. Direct patient care providers, other than anesthesia professionals, who will be performing out-of-operating-room airway management, must demonstrate the subject matter expertise and procedural skills listed in following subparagraphs 5a, 5b, and 5c to establish competency. Upon establishing competency, the facility's Chief of Staff, or designee, must recommend to the facility Director the granting of privileges or a scope of practice to perform this procedure. For anesthesia professionals, review of airway management and intubation skills, as demonstrated daily in the Operating Room setting and reflected in the individual's competencies or Ongoing Professional Practice Evaluation, may be used to determine competency.
 - a. The Subject Matter Expertise Assessment must include the successful completion of a didactic program that includes specific subject matter content and a written test.
 - b. The subject matter content must include:
 - (1) Knowledge of the major anatomic structures of the airway;
 - (2) Knowledge of how to predict and manage a difficult airway;

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(3) Knowledge of alternatives to laryngoscopy and endotracheal intubation; and

(4) Ability to formulate and verbalize an appropriate alternative plan if initial attempts at intubation are unsuccessful. This plan must include the mobilization of additional personnel as outlined in local policy.

NOTE: A local facility may use the example didactic program found on the VA Talent Management System (TMS) Web site at: <https://www.tms.va.gov/plateau/user/login.jsp>.

c. Procedural Skills. The time and practice necessary to attain procedural competency in endotracheal intubations is highly variable. Assessment of these skills must include:

(1) Completion of a skills assessment with airway task trainers or human patient simulators demonstrating proficiency in airway management using all four modalities identified in following subparagraphs 5c(2)(a) through 5c(2)(d) prior to the demonstration on actual patients.

(2) Completion of a skills assessment demonstrated on a patient(s), not a mannequin, which includes successful (i.e., without complications) case(s) of:

(a) Ventilating using a bag and mask and either an oral or nasopharyngeal airway.

(b) Insertion of a laryngeal mask airway (LMA).

(c) Endotracheal intubation(s) utilizing direct laryngoscopy.

(d) Endotracheal intubation(s) utilizing videolaryngoscopy.

NOTE: Requirements found in subparagraphs 5c(2)(a), 5c(2)(b), and either subparagraph 5c(2)(c) or subparagraph 5c(2)(d) may be met with the same patient and at the same time. Direct laryngoscopy and videolaryngoscopy cannot be done during a single patient demonstration, so a minimum of two demonstration sessions on different patients will be required during initial competency assessment to demonstrate both techniques. Examples of skills checklists that might be useful can be found at the web site of the National Center for Patient Safety at <http://vaww.ncps.med.va.gov> in the Guidelines and Directives section. This is an internal VA website not available to the public.

d. As an alternative to preceding subparagraphs 5c(2)(a) through 5c(2)(d), for a transfer in from another VA medical facility, the local VA facility may accept a written certification of airway management competency from the individual's evaluating supervisor at the losing VA medical facility (e.g., Chief or Chairman of Anesthesia, Chief or Chairman of Emergency Medicine, etc.). Competency must be certified by virtue of actual successful intubations without complications or as part of a skills assessment and not be based solely on education and training. The required internal VA form for the verification of acceptable prior VA experience is provided in Attachment B. In addition, the individual must also complete the local VA didactic training and demonstration of procedural skills, as outlined in preceding subparagraph 5c(1), to the facility Chief of Staff, or subject matter expert designee.

e. As an alternative to preceding subparagraphs 5c(2)(a) through 5c(2)(d), for a new employee, consultant or without compensation clinician who is Board Certified or Board Eligible in a specialty that included significant airway management training during the residency period, the local VA facility may consider the following to determine airway management competency:

(1) The depth and nature of the airway training the Board Certified or Board Eligible applicant received during residency.

(2) The extent to which this residency training was similar in requirements to the VA training and competency demonstration described in this Directive.

(3) Evidence that the applicant has applied the airway training in practice, with satisfactory Focused Professional Practice Evaluation (FPPE) and/or Ongoing Professional Practice Evaluation (OPPE) specific to airway management. Completion of the local VA didactic training and demonstration of procedural skills as outlined in subparagraph 5c(1) to the facility Chief of Staff, or subject matter expert designee, is required within a reasonable time period after becoming a VA employee, consultant, or without compensation clinician.

f. For non-licensed independent practitioners (non-LIPs), subparagraphs 5a, 5b, and 5c need to be applied to the establishment of a scope of practice and the annual competency assessments.

6. Clinicians who have previously been determined competent for endotracheal intubation and airway management must be reassessed for continued competency at the time of reappraisal for privileging (or for the renewal of scope of practice in the case of non-LIP clinicians). This assessment must include:

a. An assessment of training and experience in the period since previous reappraisal and privileging, including a review of provider specific data on airway management.

b. Completion of a didactic program that includes specific subject matter content, a written test and a skills assessment demonstrating proficiency in airway management using all four modalities identified in subparagraphs 5c(2)(a) through 5c(2)(d) with airway simulators or mannequins as defined by local policy. In addition, one of the following:

(1) Successful airway management and intubation at the local VA facility of one patient without complication in the preceding 2 years.

(2) Written certification of airway management competency from the individual's evaluating superior (e.g., Chief or Chairman of Anesthesia, Chief or Chairman of Emergency Medicine, etc.) at a non-VA healthcare facility. Competency must be certified by virtue of actual successful intubations without complications or as part of a skills assessment and not be based solely on education and training. The required standardized form for the verification of acceptable non-VA experience is provided in Attachment B.

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(3) Successful demonstration of airway management and intubation skills to the Chief of Staff or subject matter expert designee, with patient(s) in a training situation using the following modalities:

- (a) Ventilating using a bag and mask and either an oral or nasopharyngeal airway;
- (b) Insertion of a LMA;
- (c) Endotracheal intubation(s) utilizing direct laryngoscopy; and
- (d) Endotracheal intubation(s) utilizing videolaryngoscopy.

NOTE: Requirements found in preceding subparagraphs 6b(3)(a), 6b(3)(b) and either subparagraph 6b(3)(c) or subparagraph 6b(3)(d) may be met with the same patient and at the same time. Direct laryngoscopy and videolaryngoscopy cannot be done during a single patient demonstration so a minimum of two demonstration sessions on different patients will be required to demonstrate both techniques.

7. It is recognized that, for clinicians with established intubation skills, including the use of bronchoscopic assistance, there may not be an opportunity to demonstrate the use of alternatives to intubation such as LMA or Combitube techniques. For these individuals, demonstration of competency, knowledge, and understanding of these alternative techniques to an appropriate clinical mentor, as defined in local policy, is sufficient.

ATTACHMENT B

**DEPARTMENT OF VETERANS AFFAIRS (VA) FORM 10-0544,
PRIVILEGE AND COMPETENCY VERIFICATION**

This form can be located on the VHA Forms and Publications Web site at <http://vaww.va.gov/vaforms/>. *NOTE: This is an internal VA Web site that is not available to the public.*

ATTACHMENT C

DIFFICULT AIRWAY TEMPLATE

1. Patients with known difficult airways or who are newly assessed by Department of Veterans Affairs (VA) anesthesia providers to have a difficult airway must be informed of such findings. Detailed information about the difficult airway must also be entered in the Computerized Patient Record System (CPRS) for display in the patient posting by filling out a CPRS template that includes the information in section 2. In addition to receiving a printed copy of the template, all patients must be informed by a VA provider about the nature of the difficult airway.

2. Below is an example of the information that needs to be in the CPRS template.

Date: [current date]

[Patient Name] has a difficult airway. DOB: [Date of Birth]

[Patient Name]

During your recent pre-operative evaluation or anesthetic and surgery, your anesthesia providers noted that you have a difficult airway.

Specifically: _____ difficult mask ventilation, _____ difficult laryngoscopy, _____ difficult intubation, or _____ failed intubation.

An unexpected difficult airway is a known potential concern with general anesthesia and can be dangerous. If you should need anesthesia or mechanical ventilation in the future, it is important that you inform your anesthesia provider and surgeon of the potential for a difficult airway.

Ideally you would give them this letter to review.

Physical Exam:

Body mass index (BMI): < 25 _____ 25 - 30 _____ > 30 _____

Mallampati airway classification: _____ I- soft palate, uvula, pillars _____ II- soft palate, pillars _____ III-soft palate _____ IV-hard palate

Mouth opening: _____ cm

Dentition: Native _____ prominent incisors _____ edentulous _____ Jaw protrusion (can protrude lower incisors beyond upper incisors)

Thyromental distance: _____ > 6 cm _____ < 6 cm

Neck extension: _____ full (35°) _____ limited (<15°)

Details of what actually took place during airway management:

Intubation: _____ emergency _____ elective

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Bag and mask ventilation was _____ Easy _____ Difficult _____ Not possible

Muscle relaxants were _____ administered _____ not administered

Cormack/Lehane Laryngoscopic view: _____ I - full view of the glottis opening _____ II - epiglottis and arytenoids

_____ III - tip of epiglottis _____ IV - only soft palate

Intubation: _____ Successful _____ Not successful

_____ An LMA was placed and anesthesia proceeded without further difficulties.

_____ Intubation was performed _____ through a Fast track laryngeal mask airway

_____ with video assisted laryngoscopy

_____ with fiberoptic bronchoscope guidance

_____ An emergency tracheostomy was performed.

_____ Your surgery and anesthetic were rescheduled.

_____ Decadron was administered to prevent swelling postoperatively.

_____ You were admitted postoperatively for _____.

_____ Other _____

Extubation was _____ routine _____ over a stylet.

Complications

Although a minor sore throat is common after general anesthesia, if you experience a persistent severe sore throat, difficulty swallowing or fever, immediately contact your surgeon and the anesthesia provider on call at the facility.

[Electronic Signature]