Department of Veterans Affairs
Office of Inspector General

Combined Assessment Program Summary Report

Enteral Nutrition Safety in Veterans Health Administration Facilities

Report No. 12-01531-187

May 22, 2012

VA Office of Inspector General
Washington, DC 20420

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Executive Summary

The VA Office of Inspector General Office of Healthcare Inspections completed an evaluation of enteral nutrition (EN) safety in Veterans Health Administration (VHA) facilities. The purposes of the evaluation were to determine whether facilities complied with Joint Commission standards and VHA requirements to: (1) establish and implement EN policies and practices, (2) manage and document EN care in the electronic health record, and (3) provide continuity of care for patients receiving EN. We also determined whether facilities incorporated selected safe EN practices as recommended by the American Society for Parenteral and Enteral Nutrition.

Inspectors evaluated EN safety at 27 facilities during Combined Assessment Program reviews conducted from April 1–September 30, 2011. We identified several strengths in VHA facilities' management of EN, including documentation that encompassed flow rate and water flushes, safe storage of products, and Nutrition Service documentation. However, we identified opportunities for improvement in five areas.

We recommended that the Under Secretary for Health evaluate current VHA requirements and revise them to include applicable industry recommendations regarding EN safety practices and documentation. We also recommended that the Under Secretary for Health, in conjunction with Veterans Integrated Service Network and facility senior managers, ensures that:

- Facilities' policies and practices address all VHA-required EN elements.
- Electronic health record documentation consistently includes all VHA-required EN elements.
- Clinicians provide EN education for patients discharged on EN and/or their caregivers.
- Facilities strengthen continuity of care processes for follow-up and monitoring of patients discharged on EN.

DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington, DC 20420

TO: Under Secretary for Health (10)

SUBJECT: Combined Assessment Program Summary Report – Enteral Nutrition Safety in Veterans Health Administration Facilities

Purpose

The VA Office of Inspector General Office of Healthcare Inspections evaluated enteral nutrition (EN) safety in 27 Veterans Health Administration (VHA) facilities. The purposes of the evaluation were to determine whether facilities complied with Joint Commission (JC) standards and VHA requirements to: (1) establish and implement EN policies and practices, (2) manage and document EN care in the electronic health record (EHR), and (3) provide continuity of care for patients receiving EN. We also determined whether facilities incorporated selected safe EN practices recommended by the American Society for Parenteral and Enteral Nutrition (ASPEN).[1]

Background

EN is a potentially life-saving treatment used for individuals who are unable to consume food and beverages by mouth. EN refers to the provision of nutritional formula and water through a tube into the gastrointestinal tract. Tubes commonly used in EN are either inserted through the nose into the stomach (nasogastric tube) or surgically placed directly into the stomach or small intestine. Accidental insertion of an EN tube into the lungs is a potentially life-threatening complication. Therefore, VHA requires x-ray confirmation of tube placement prior to using the tube for EN feedings, medications, or water.

Aspiration and tube-related adverse events are among the most significant risks associated with EN. Aspiration occurs when EN formula, gastric contents, or other foreign material enters the airway, causing injury or infection, respiratory distress syndrome, and other complications. The reported rate of aspiration pneumonia in

[1] ASPEN is recognized as the organization promoting industry standards for nutrition support.

tube-fed long-term care residents ranges from 5–58 percent,[2] and it has been considered the most common cause of death in patients fed by tube.[3] Clinicians can reduce aspiration risk by obtaining x-ray confirmation of correct tube placement, checking gastric residual, and elevating the backrest to a 30–45 degree angle.

In April 2006, The JC issued a Sentinel Event Alert because of several deaths related to EN tubing connection problems.[4] EN delivery sets contain tubes and pumps that may be confused or combined with those used for intravenous access. Other serious EN-related problems include medication interactions, tube misplacement, and metabolic complications.[5]

In January 2009, ASPEN published the "Enteral Nutrition Practice Recommendations." These guidelines are supported by research-based evidence, expert opinion, and editorial consensus.[6] They include important steps to prevent tubing misconnections, such as retracing tubes to their origin and not using Luer devices[7] in EN. VHA policy provides requirements for EN;[8] however, it includes few of ASPEN's 2009 EN safety recommendations.

We identified strengths in VHA facilities' management of EN in the following areas:

- Documented orders for product, flow rate or volume to deliver, and water flushes
- Limited hang times for EN products
- Safe storage of EN products
- Nutrition Service documentation
- Short-term use of nasogastric tubes or, if continuation was needed, reasons were documented

Scope and Methodology

We performed this review in conjunction with 27 Combined Assessment Program reviews of VHA medical facilities conducted from April 1–September 30, 2011. The facilities reviewed represented a mix of size, affiliation, geographic location, and Veterans Integrated Service Networks (VISNs). We interviewed selected program

[2] Shai Gavi, et al., "Management of Feeding Tube Complications in the Long-Term Care Resident," *Annals of Long Term Care: Clinical Care and Aging*, Vol. 16, No. 4, April 1, 2008, pp. 28–32. Accessed 2/07/2011.
[3] Paul E. Marik, "Aspiration Pneumonitis and Aspiration Pneumonia," *New England Journal of Medicine*, Vol. 344, No. 9, March 1, 2001, p. 668.
[4] The JC Sentinel Event Alert, "Tubing misconnections—a persistent and potentially deadly occurrence," Issue 36, April 3, 2006. Accessed 2/11/2011.
[5] Peggi Guenter, et al., "Enteral Feeding Misconnections: A Consortium Position Statement," *Joint Commission Journal on Quality and Patient Safety*, Vol. 34, No. 5, May 2008, pp. 285–292. Accessed 2/18/2010.
[6] Robin Bankhead, et al., "A.S.P.E.N. Enteral Nutrition Practice Recommendations," *Journal of Parenteral and Enteral Nutrition*, Vol. 33, No. 2, March/April 2009, pp. 122–167.
[7] A Luer device is a fitting that allows tubes of varying sizes and nature to be connected.
[8] VHA Handbook 1109.05, *Specialized Nutritional Support*, May 10, 2007.

managers and reviewed documents, including facility self-assessments, policies, and the EHRs of outpatients and acute care and community living center patients.

We generated an individual Combined Assessment Program report for each facility. For this report, we analyzed and summarized the data from the individual facility Combined Assessment Program reviews to identify system-wide trends. Non-compliance exceeding 10 percent was generally used to determine opportunities for improvement in the areas reviewed.

Inspectors conducted the reviews in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency.

Inspection Results

Issue 1: EN Policy

VHA requires facilities to establish EN safety policies and practices that address specific elements. ASPEN recommends that additional practices be incorporated into facilities' EN policies to ensure patient safety. We reviewed the 27 facilities' policies to determine whether VHA requirements and selected ASPEN-recommended EN safety practices were addressed. Table 1 below provides a summary of non-compliance results for VHA-required elements.

Table 1

VHA requires that staff:	Not included in facility policy
Consult a pharmacist to evaluate the patient's medication profile	11/27 (41%)
Address EN infection control in policy	8/27 (30%)
Establish performance monitors for EN support	8/27 (30%)
Confirm nasogastric tube placement by x-ray prior to administering EN feedings, medications, or water	4/27 (15%)
Not directly add medications to enteral formulas or feeding systems (to avoid chemical instability and/or food-drug interactions)	3/27 (11%)

Table 2 below provides a summary of non-compliance results for selected ASPEN-recommended elements.

Table 2

ASPEN recommends that staff:	Not included in facility policy
Use sterile water flushes for high-risk EN patients	13/27 (48%)
Don gloves prior to administering EN to reduce the potential for contamination	10/27 (37%)
Mark the exit site of EN tubes so that an observed change in tube length might signal staff to check for dislocation	7/27 (26%)
Compare the EN formula label to the EN order to check for accuracy before administration	6/27 (22%)
Not use Luer devices when administering EN	5/27 (19%)
Routinely trace lines back to their origins and ensure they are secure prior to starting EN	4/27 (15%)

We recommended that facilities' policies and practices address all VHA-required EN elements. We also recommended that VHA evaluate current requirements and revise them to include applicable industry-recommended EN safety practices.

Issue 2: EN Documentation

To ensure safe administration of EN, VHA requires that clinicians document specific elements in EHRs. ASPEN recommends that staff perform and document additional safety elements. We reviewed EHR documentation for 239 patients to determine whether clinicians addressed required and recommended EN elements for acute care and community living center patients. Table 3 below summarizes VHA requirements that were not included in EHR documentation.

Table 3

VHA requires that staff:	No evidence found in EHR documentation
Check and evaluate gastric residuals of EN feedings	47/239 (20%)
Order elevated headrest positioning for EN patients	32/239 (13%)
Confirm nasogastric tube placement by x-ray prior to administering EN feedings, medications, or water	9/68 (13%)[9]

[9] Of the 239 EHRs we reviewed, 68 patients were receiving EN through nasogastric tubes.

Table 4 below summarizes ASPEN recommendations addressing EN orders that were not included in VHA policy or EHR documentation.

Table 4

ASPEN recommends that:	No evidence found in EHR documentation
Oral intake orders (such as "nothing by mouth" or "no tray") include liquids and specially prepared foods	44/239 (18%)
The EN order includes the method of EN administration (such as pump, gravity-assisted, or bolus)	32/239 (13%)

We recommended that EHR documentation include all VHA-required EN elements. We also recommended that VHA evaluate current requirements and revise them to include industry-recommended EN documentation.

Issue 3: EN Continuity of Care

VHA requires facilities to develop protocols for continuity of care that include monitoring tolerance and scheduling follow-up for outpatients managing EN at home. We reviewed 184 EHRs to determine whether patients discharged on EN and/or their caregivers received education and whether outpatients on home EN were monitored during the past 12 months. Table 5 below summarizes EHR non-compliance results.

Table 5

We determined whether staff:	No evidence found in EHR documentation
Educated patients and/or their caregivers upon discharge regarding home EN management	10/70 (14%)[10]
Evaluated outpatients on home EN in a nutrition clinic	32/114 (28%)[11]
Checked tube sites during outpatient evaluations	15/108 (14%)[12]
Documented weight during outpatient evaluations	14/108 (13%)

We recommended that facilities ensure patients discharged on EN and/or their caregivers receive EN education. We also recommended that facilities strengthen continuity of care processes for follow-up and monitoring of patients discharged on EN.

[10] We reviewed the EHRs of 44 acute care and 26 community living center patients discharged home on EN.
[11] We reviewed 114 EHRs of outpatients who managed EN at home.
[12] Of the 114 outpatients on home EN management, 108 were evaluated in an outpatient clinic.

Conclusions

We identified several strengths in VHA facilities' management of EN, including documented orders for the product, flow rate or volume to deliver, and water flushes; safe storage of EN products; and Nutrition Service staff documentation. However, compliance with existing VHA requirements could be improved through more comprehensive facility policies and more thorough EHR documentation. We also identified the opportunity for VHA to augment policy by incorporating ASPEN recommendations. Additional policy guidance will promote improved EN documentation, safe practices, and continuity of care for our veterans.

Recommendations

Recommendation 1. We recommended that the Under Secretary for Health evaluate current VHA requirements and revise them to include applicable industry recommendations regarding EN safety practices and documentation.

Recommendation 2. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that facilities' policies and practices address all VHA-required EN elements.

Recommendation 3. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that EHR documentation consistently includes all VHA-required EN elements.

Recommendation 4. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that clinicians provide EN education for patients discharged on EN and/or their caregivers.

Recommendation 5. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that facilities strengthen continuity of care processes for follow-up and monitoring of patients discharged on EN.

Comments

The Under Secretary for Health concurred with the findings and recommendations. The implementation plan is acceptable, and we will follow up until all actions are completed.

JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Appendix A

Under Secretary for Health Comments

Department of Veterans Affairs **Memorandum**

Date: May 3, 2012

From: Under Secretary for Health (10)

Subject: **OIG Draft Report, Combined Assessment Program Summary Report: Enteral Nutrition Safety in Veterans Health Administration Facilities**

To: Assistant Inspector General for Healthcare Inspections (54)

1. I have reviewed the draft report and concur with the report's recommendations.

2. Thank you for the opportunity to review the draft report. Attached is the complete corrective action plan for the report's recommendations. If you have any questions, please contact Linda H. Lutes, Director, Management Review Service (10A4A4) at (202) 461-7014.

(original signed by:)
Robert A. Petzel, M.D.

Attachment

VETERANS HEALTH ADMINISTRATION (VHA)
Action Plan

OIG Draft Report, Combined Assessment Program Summary Report: Enteral Nutrition Safety in Veterans Health Administration Facilities

Date of Draft Report: March 12, 2012

Recommendations/ Actions	Status	Completion Date

OIG Recommendations

Recommendation 1. We recommended that the Under Secretary for Health evaluate current VHA requirements and revise them to include applicable industry recommendations regarding EN safety practices and documentation.

VHA Response

Concur

The Veterans Health Administration (VHA) is revising VHA Handbook 1109.05, Specialized Nutrition Support, to include applicable industry recommendations regarding enteral nutrition (EN) safety practices and documentation. Expected publication date of handbook is no later than (NLT) September 30, 2012.

	In process	NLT September 30, 2012

Recommendation 2. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that facilities' policies and practices address all VHA-required EN elements.

VHA Response

Concur

The Offices of the Deputy Under Secretary for Health for Policy and Services (DUSHPS) and Deputy Under Secretary for Health for Operations and Management (DUSHOM) will charter a multi-disciplinary EN Task Force. This EN Task Force will develop a sample facility policy template

for EN that facilities can use to ensure policies and practices address all VHA-required elements. The EN Task Force will develop methodology for review of facility policies. These policies will be submitted for review by the EN Task Force to ensure that they include VHA-required elements. The completed review and approval of facility policies is expected no later than six months subsequent to handbook distribution.

In process NLT March 31, 2013

Recommendation 3. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that EHR documentation consistently includes all VHA-required EN elements.

VHA Response

Concur

The multi-disciplinary EN Task Force will develop a training module that will include all VHA-required EN elements for electronic health record (EHR) documentation. The module will be developed in collaboration with Employee Education Service (EES) and will be presented as live meetings and placed into the Talent Management System (TMS). This will ensure that documentation of training can be reviewed by supervisory staff. The development and provision of national training programs on this topic is expected no later than six months subsequent to handbook distribution. Staff adherence to EHR documentation standards for inclusion of all VHA required EN elements will be reviewed through EHR periodic review by facility supervisory staff.

In process NLT March 31, 2013

Recommendation 4. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that clinicians provide EN education for patients discharged on EN and/or their caregivers.

VHA Response

Concur

The multi-disciplinary EN Task force will develop criteria for what should be included in education materials that facility staff can use to provide information to patients and caregivers prior to discharge. Local facility policy is to specify the membership of the cross-coverage clinical team who will provide EN education (see recommendation 2 response re local facility

policy issues). The completed development of cross-coverage clinical teams and education tools is expected no later than 6 months subsequent to handbook distribution.

In process NLT March 31, 2013

Recommendation 5. We recommended that the Under Secretary for Health, in conjunction with VISN and facility senior managers, ensures that facilities strengthen continuity of care processes for follow-up and monitoring of patients discharged on EN.

VHA Response

Concur

The multi-disciplinary EN Task Force will work with appropriate VHA offices (e.g., Primary Care, Geriatrics, and Home-Based Primary Care) to develop individualized continuity of care assessments processes and guidelines. The task force will also develop a plan for monitoring how facilities strengthen individualized continuity of care processes for follow-up and monitoring of patients discharged on EN to include evaluation of facility clinician adherence to continuity of care documentation through EHR review by supervisory staff. The completed development of the sample guidelines and monitoring program is expected no later than 6 months subsequent to handbook distribution.

In process NLT March 31, 2013

April 2012

Appendix B

OIG Contact and Staff Acknowledgments

OIG Contact	For more information about this report, please contact the Office of Inspector General at (202) 461-4720.
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Appendix C

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