Department of Veterans Affairs
Office of Inspector General

Healthcare Inspection

Hospitalized Community-Dwelling Elderly Veterans: Cognitive and Functional Assessments and Follow-up after Discharge

Report No. 09-01588-92

March 4, 2010

VA Office of Inspector General
Washington, DC 20420

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Executive Summary

The VA Office of Inspector General, Office of Healthcare Inspections evaluated the extent to which Veterans Health Administration (VHA) clinicians conduct recommended assessments of elderly patients during hospitalization and ensure post-discharge follow-up care.

We identified patients discharged from VA acute care hospitals during October 1–December 31, 2008, who were age ≥ 75 at the time of admission and who were discharged to a community setting. A random sample of these patients was selected for comprehensive medical record review. Reviewers evaluated records for the presence of functional and cognitive assessments. Completion of these assessments is widely accepted as a basic level of care for vulnerable elders, such that non-compliance indicates that care is likely of poor quality.

During the study period, 15,456 veterans who were age ≥ 75 at the time of admission were discharged to a community setting from 142 VA acute care hospitals. The analysis of post-discharge care used data for all 13,913 patients with lengths-of-stay greater than one day, excluding those who died or were re-admitted on the day of discharge.

We found that assessments of functional status were completed for more than 97 percent of the hospitalized elders whose medical records we examined. Likewise, most elder veterans (94 percent) had some evidence of care in the six weeks after hospital discharge. In contrast, less than 40 percent of patients had evidence of any cognitive assessment during their hospitalization or in the six months prior to admission. Hospitals with and without geriatrics academic programs did not differ substantially in these aspects of performance.

We recommended that the Under Secretary for Health develop and implement a plan to ensure that vulnerable elderly veterans admitted to VA hospitals have a documented assessment of cognitive functioning.

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

TO: Under Secretary for Health

SUBJECT: Healthcare Inspection – Hospitalized Community-Dwelling Elderly Veterans: Cognitive and Functional Assessments and Follow-up after Discharge

Purpose

To evaluate the extent to which Veterans Health Administration (VHA) clinicians conducted recommended assessments of elderly patients during hospitalization and ensured post-discharge follow-up care.

Background

Aging of the U.S. population is nowhere more evident than among veterans. While nearly 40 percent of veterans were 65 years old or older in 2007, more than 46 percent are projected to be in that age group by 2015.[1] Further, hospitalized veterans are known to have multiple coexisting medical illnesses and poor functional status,[2] and hospitalization is well-described as a risk factor for early deterioration.[3] Hospitalized elderly veterans can be readily identified as a group for which specific interventions should be considered, and intensive follow-up can improve quality of life[4] and prevent readmission.[4,5]

As the goal of medical care for the elderly has progressed beyond survival to maximizing quality of life, attention has focused on the overall quality of medical care that the elderly

[1] VA Office of Policy and Planning.
[2] Weinberger M, Oddone EZ, Henderson WH. Does increased access to primary care reduce hospital readmissions? N Engl J Med. 1996;334:1441–7.
[3] Schonberg MA, et al. Index to Predict 5-Year Mortality of Community-Dwelling Adults Aged 65 and Older Using Data from the National Health Interview Survey. J Gen Intern Med. 2009;24:1115–22.
[4] Naylor MD, et al. Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. J Am Geriatr Soc. 2004;52:675–684.
[5] Rich MW, et al. A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. N Engl J Med. 1995; 333:1190–5.

receive. RAND Corporation's Assessing Care of Vulnerable Elders (ACOVE) project developed a set of quality indicators for the care of the vulnerable elderly.[6] Vulnerable elders are defined as elderly patients at increased risk for death or severe disability within the next 2 years. Based on comprehensive literature reviews and structured expert meetings, these guidelines established a basic level of care for the vulnerable elderly, such that non-compliance indicates that care is likely of poor quality.

ACOVE quality indicators have been the basis for specific measures incorporated into the National Committee for Quality Assurance's widely-used Healthcare Effectiveness Data and Information Set (HEDIS). HEDIS includes 71 measures across 8 domains of care and is used by more than 90 percent of U.S. health plans.[7]

VHA has long been a leader in geriatrics research, education, and clinical care. Twenty "centers of geriatric excellence" focus on various aspects of the quality of life and care of aging veterans. These centers serve as resources for other VA facilities.[8] The VHA Dementia Steering Committee has developed recommendations on specific aspects of dementia care,[9] but the extent to which accepted healthcare services are provided for elderly veterans across the system is unclear. This review evaluated ACOVE quality indicators in the care of hospitalized veteran elderly, focusing on in-hospital patient assessments and follow-up care after discharge.

Scope and Methodology

Population and Hospitals

We identified patients discharged from VHA acute care hospitals during October 1–December 31, 2008, who were age ≥ 75 at the time of admission and who were discharged to a community setting.[10] Because advanced age is associated with an increased risk of functional decline, we excluded patients younger than 75 years old. We also excluded patients admitted to "Observation" status. For patients with multiple hospitalizations during the study period we analyzed only the most recent.

We identified hospitals with academic geriatrics programs based on affiliations with one of VHA's Geriatric Research, Education and Clinical Centers (GRECCs)[11] and on

[6] Wenger NS, Shekelle PG, and the ACOVE Investigators. Assessing Care of Vulnerable Elders: ACOVE Project Overview. Ann Intern Med. 2001;135:642–6.
[7] http://www.ncqa.org/Portals/0/HEDISQM/HEDIS2010/2010_Measures.pdf.
[8] http://www.patientcare.va.gov/Geriatrics.asp
[9] Shay K, Burris JF, State of the Art Planning Committee. Setting the stage for a new strategic plan for geriatrics and extended care in the Veterans Health Administration: summary of the 2008 VA State of the Art Conference, "The changing faces of geriatrics and extended care: meeting the needs of veterans in the next decade." J Am Geriatr Soc. 2008;56:2330–9.
[10] VHA Patient Treatment File, a national inpatient data extract. See Appendix A for included and excluded discharge locations.
[11] http://www.patientcare.va.gov/Geriatrics.asp. Because some of the 20 GRECCs are shared between facilities, 25 Hospitals have the GRECC designation.

approved positions for geriatrics fellowship training.[12] Twenty-one hospitals designated as GRECCs also had geriatrics training programs and were considered geriatrics academic hospitals for the purpose of comparisons with hospitals having neither a GRECC affiliation nor a geriatrics training program (non-geriatrics academic hospitals).

Patient Selection and Medical Record Review

We selected a random sample of 300 patients from the study population for comprehensive medical record review. We subsequently excluded 74 patients with hospitalizations of one day or less because admission assessments may be completed after the first hospital day and because detailed assessments may not be feasible during these brief hospitalizations.

Medical records were examined using an algorithm developed with a test sample. Reviewers used VHA's electronic medical record system to evaluate medical records for the presence of functional and cognitive assessments during each patient's hospitalization.

Our evaluation of functional and cognitive assessments was based on the following ACOVE Quality Indicator:

> IF a vulnerable elder is admitted to a hospital or is new to a physician practice, THEN multidimensional assessment of cognitive ability and assessment of functional status should be documented BECAUSE screening for dementia can lead to early detection and initiation of treatment that may delay further progression.[13]

This recommendation is supported by the observation that screening can detect dementia which is frequently not apparent to patients or caregivers and by multiple published guidelines advocating assessments on admission to a nursing home, hospital, or physician practice.[13]

For this review, adequate assessment of cognitive function was considered to be any explicit mention of an assessment of short-term memory[14] or visuospatial/executive functioning. No particular measurement tool was required and any instrument incorporating either of these elements was accepted. In particular, the mini-mental state exam (MMSE) and related tests were accepted.[15] If no cognitive assessment was found

[12] VHA Office of Academic Affiliations. Fifty-six hospitals had at least one approved position for geriatrics trainees during the study period.
[13] Chow TW, MacLean CH. Quality indicators for dementia in vulnerable community-dwelling and hospitalized elders. Ann Intern Med. 2001;135–668.
[14] Chodosh J, Edelen MO, Buchanan JL, et al. Nursing home assessment of cognitive impairment: development and testing of a brief instrument of mental status. J Am Geriatr Soc. 2008;56:2069–75.
[15] Deputy Under Secretary for Health for Operations and Management Memorandum, *"Brief Mental status Measures – Alternatives to Mini Mental State Exam (MMSE),"* June 13, 2007.

during the index hospitalization, the review was extended to include the 6-month period prior to admission. Examination of medical records was supplemented by text word searches using the terms memory, cognitive, and MMSE.

An adequate functional assessment required a description of the patient in any two of the following areas: dressing, eating, ambulating, toileting, hygiene, preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, and using a telephone. No particular measurement tool was required and any instrument incorporating these elements was accepted.[16] If assessments were absent, records were examined by a second reviewer.

Post-Discharge Care

For the analysis of post-discharge care, we excluded patients with a length-of-stay of 1 day or less and those who died or were readmitted on the day of discharge.

We based our evaluation of post-discharge care on the following ACOVE Quality Indicator in the "continuity and coordination of care" topic area.

> IF a vulnerable elder is discharged from a hospital to home and survives at least 4 weeks after discharge, THEN he or she should have a follow-up visit or documented telephone contact within 6 weeks of discharge AND the physician's medical record documentation should acknowledge the recent hospitalization BECAUSE follow-up with a health provider after hospital discharge is needed for management of the disease process that prompted the hospitalization and for review of medications, treatment modalities, and pending test results.[17]

An episode of care was defined as any inpatient or outpatient encounter, with a corresponding Current Procedural Terminology code.[18] To count as post-discharge care, the encounter must have occurred at least one day after the index discharge date. Only care rendered within the first 50 days after discharge was included in the analysis.

We accounted for patient deaths by matching the study population with the Social Security Administration's Death Master File.

We conducted the inspection in accordance with *Quality Standards for Inspections* published by the President's Council on Integrity and Efficiency.

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[16] Acceptable instruments included but were not limited to the following: Barthel Index of Activities of Daily Living, Katz Index of Independence in Activities of Daily Living, Instrumental Activities of Daily Living Scale, and the Geriatric Health Questionnaire.

[17] Wenger NS, Young R. Quality Indicators of Continuity and Coordination of Care for Vulnerable Elder Persons. RAND Corporation Working Paper WR-176, August 2004. See also ACOVE Project. Ann Intern Med. 2001;135–653.

[18] VHA Patient Treatment File and National Patient Care Database.

Data Analysis

Differences in completion of assessments based on the presence of academic geriatrics programs were evaluated using the chi-square test. Confidence intervals were calculated using a normal approximation to the binomial distribution. The Kaplan-Meier method was used for graphical presentation of events from time of hospital discharge, with censoring of patients at time of death, and upon receipt of post-discharge care. Trends in the provision of post-discharge care between geriatrics academic hospitals and non-geriatric academic hospitals were compared using the log-rank test.

Results

During October 1–December 31, 2008, 15,456 veterans who were age ≥ 75 at the time of admission were identified as having been discharged from 142 VHA acute care hospitals to community settings. After the initial selection of 300 patients from this population, 74 patients were excluded because they had been hospitalized for less than one day and 14 were excluded because they had been miscoded and in fact were discharged to nursing homes. The median age of the remaining 212 patients was 82 years (range 75-100), 1.4 percent were female, and 49.5 percent were married. The median length of stay was 4 days (range 2–53) (see Table 1).

Table 1. Characteristics of Selected Veterans Admitted to VHA Acute Care Hospitals October 1–December 31, 2008, and Discharged to Community Settings.

Total Number of Patients in Review Population	15,456
Randomly Selected Sample	300
Patients with length-of-stay >1 day and confirmed to have been discharged to community settings	212
Age, median years (range)	82 (75–100)
Sex, percent female	1.4
Marital status, percent married	49.5
Length of stay, *(*median days) (range)	4 (2–53)

Cognitive and Functional Assessments

Among the 212 evaluated patients, 56 (26.4 percent) had evidence of a cognitive assessment during the inpatient visit and 28 (13.2 percent) had no cognitive assessment during the hospital stay but did have an assessment during the prior 6 months. Taken together, 84 patients (39.6 percent; 95 percent confidence interval, 33.0–46.5) had a recent cognitive assessment. Functional assessment during hospitalization was

documented for 207 (97.6 percent) patients (Tables 2 and 3). Most functional assessments were documented by nursing staff using standardized admission templates. Geriatrics academic hospitals and non-geriatrics academic hospitals did not differ significantly with respect to either assessment ($p > 0.5$ for all comparisons).

Table 2. Medical Record Review: Cognitive Assessment. Geriatrics academic hospitals were defined as those affiliated with a GRECC and having a geriatrics fellowship training program. Non-geriatrics academic hospitals had neither GRECC affiliation nor fellowship training. For all comparisons between hospital types, $p > 0.5$. GRECC = Geriatric Research, Education and Clinical Center.

		Hospital Type		
	Total (88 hospitals)	Geriatrics Academic (16)	Non-Geriatrics Academic (42)	Other (30)
Number of patients	212	41	78	93
Assessment during hospitalization (percent)	56 (26.4)	10 (24.4)	24 (30.8)	22 (23.7)
Assessment only during prior 6 months (percent)	28 (13.2)	5 (12.2)	9 (11.5)	14 (15.1)
ANY Assessment (percent)	84 (39.6)	15 (36.6)	33 (42.3)	36 (38.7)

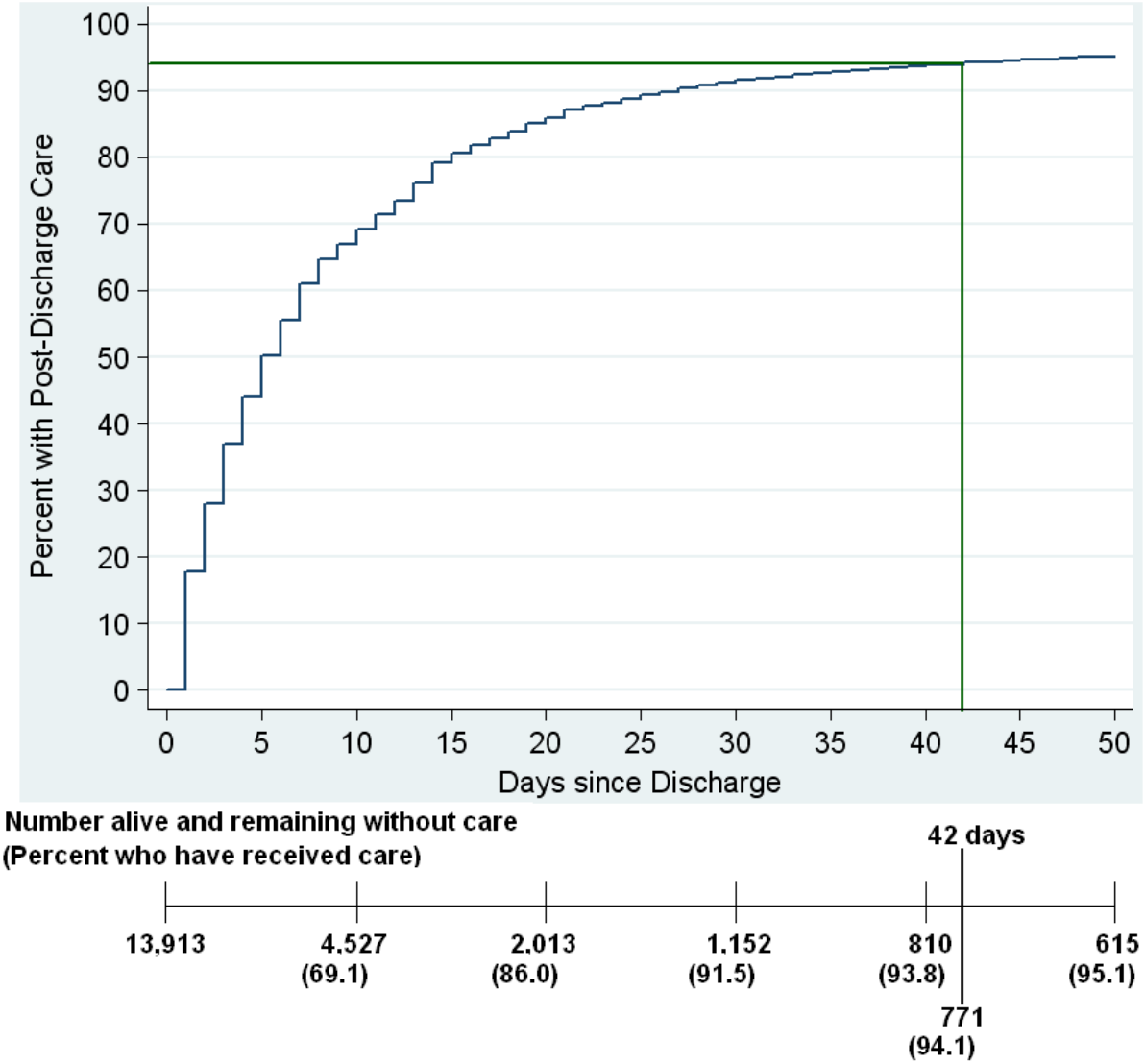
Table 3: Medical Record Review: Functional Assessment. See Table 2 for definitions.

		Hospital Type		
	Total (88 hospitals)	Geriatrics Academic (16)	Non-Geriatrics Academic (42)	Other (30)
Number of patients	212	41	78	93
Assessment during hospitalization (percent)	207 (97.6)	40 (97.6)	78 (100)	90 (96.8)

Post-Discharge Care

The analysis of post-discharge care used data for all 13,913 patients with lengths-of-stay greater than 1 day and who did not die or require readmission on the day of discharge. Among 13,698 patients who were alive 4 weeks after discharge, 12,921 (94.3 percent) had documented VHA care within 6 weeks of discharge. Most patients received care within 10 days of discharge (Figure 1).

Figure 1. Kaplan-Meier Estimate of the Probability of Post-Discharge VHA Care.



Comparison of post-discharge care for the 2,785 patients from the 21 hospitals with geriatrics academic programs and the 84 hospitals (5,371 patients) without such programs revealed that patients at hospitals with geriatric academic programs were more likely to receive care within 50 days of discharge ($p = 0.0003$). However, the difference in follow-up care based on hospital type was small, with Kaplan-Meier estimates differing by

4.3 percent at 10 days and by 1.2 percent at 6 weeks. More than 94 percent of patients in both groups had some evidence of care at 6 weeks post-discharge.

Discussion

Assessments of functional status were recorded in almost all patients, in most cases as part of admission nursing documentation. Follow-up care was also evident for most discharged veterans, while cognitive assessments were accomplished for far fewer. Hospital status as a center for academic geriatrics had no substantial impact on findings. Our evaluation for the presence of cognitive and functional assessments required detailed medical review of a limited number of randomly selected records. However, the assessment of follow-up care utilized data for all patients during the study period. This approach allowed for a robust appraisal of follow-up care, but was limited by the data available. We counted as evidence of post-discharge care any progress note entry into the electronic medical record for which workload information was provided. These encounters therefore included notes describing coordination of care in the absence of any direct involvement with patients, possibly exaggerating the extent of meaningful follow-up care. At the same time, our estimate may have understated follow-up care by not accounting for care by private providers.

An additional limitation of our review results from inclusion of unresponsive and uncooperative patients, for whom a cognitive assessment would not have been possible. We noted, however, that the mental status of patients often changed throughout hospitalizations and patients for whom an assessment was not possible on admission could often be examined at some point prior to discharge. Our reviews encompassed the entire hospital stay for all patients. Inclusion of patients who were persistently unresponsive or uncooperative could have understated the rate of appropriate completion of assessments. However, many of these patients would have been excluded from our review because they were discharged to nursing homes, and our review was limited to the care of patients discharged to community settings.

Conclusions

We found that assessments of functional status were completed for more than 97 percent of the hospitalized elderly veterans whose medical records were examined. Likewise, most elderly veterans (94 percent) had some evidence of care in the 6 weeks after hospital discharge. In contrast, less than 40 percent of patients' medical records contained evidence of any cognitive assessment during their hospitalization or in the 6 months prior to admission. Hospitals with and without geriatrics academic programs did not differ in these aspects of performance.

Recommendation

We recommended that the Under Secretary for Health develop and implement a plan to ensure that vulnerable elders admitted to hospitals have a documented assessment of cognitive functioning.

Comments

Under Secretary for Health Comments

The Under Secretary for Health agreed with the findings and conclusions (See Appendix B for the complete text of the Under Secretary's comments).

Assistant Inspector General for Healthcare Inspections Comments

The Under Secretary for Health's comments and implementation plan are responsive to the recommendation. We will continue to follow up until all actions are complete.

The Under Secretary stated that "cognitive testing of individuals on the basis of age alone, absent signs or symptoms of cognitive change, is not justified in the face of potential adverse consequences of false positive findings."

The RAND Corporation's Assessing Care of Vulnerable Elders (ACOVE) quality indicators were the basis of this review. In accordance with the relevant ACOVE quality indicators, we did not recommend cognitive testing of individuals on the basis of age alone. Hospitalization constitutes an important predictor of subsequent decline in elders, and hospitalized elders were the subject of this review.

(original signed by:)
JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Appendix A

Discharge Locations

Included Discharge Locations (Discharged to Community)

- Community/Independent.
- Foster Home.
- Halfway House.
- Boarding House.
- Residential Hotel or Care Facility.
- Other Placement/Unknown.
- VA-Paid Home/Community Health.
- Home-Based Primary Care.
- Medicare Home Health Care.
- Other Home Health Care.

Excluded Discharge Locations

- VA Medical Center.
- Military Hospital.
- Other Federal Hospital.
- Other Government Hospital at VA Expense.
- Community Hospital.
- VA NHCU.
- CNH at VA Expense.
- State Home-Nursing.
- State Home-Domiciliary.
- VA Domiciliary.
- Penal Institution.
- Spinal Cord Injury-VA Approved Program.
- Respite.
- Hospice.

Appendix B

Under Secretary for Health Comments

Department of Veterans Affairs **Memorandum**

Date: January 27, 2010

From: Acting Under Secretary for Health (10)

Subject: **OIG Draft Report, Healthcare Inspection – Hospitalized Community-Dwelling Elderly Veterans: Cognitive and Functional Assessments and Follow-up after Discharge, (WebCIMS 447143)**

To: Assistant Inspector General for Healthcare Inspections (54)

1. I have reviewed and I concur with the draft report and recommendation. I am pleased that assessments of functional status were found to be completed for over 97 percent of the medical records examined for hospitalized Veterans. The report highlights the need to care for frail and elderly Veterans, and presents the specific skills and principles necessary to give quality care for this vulnerable population.

2. The Veterans Health Administration (VHA) has long recognized the uniquely complex and involved health care needs for hospitalized elderly Veterans. I chartered a Dementia Steering Committee (DSC) comprised of field and Department of Veterans Affairs Central Office subject matter experts. The DSC was charged with ongoing review of scientific evidence as the basis for developing guidance for VHA clinical operations involving elderly Veterans who are at heightened risk for cognitive decline due to progressive degenerative neurological disease. The DSC has closely examined the professional and scientific literature concerning cognitive screening, and repeatedly determined that cognitive testing of individuals on the basis of age alone, absent signs or symptoms of cognitive change, is not justified in the face of potential adverse consequences of false positive findings. This determination is consistent with the conclusions and recommendations of the United States Preventive Services Task Force. Such guidance from the DSC may explain your finding of less than 40 percent of a cognitive assessment during hospitalization or 6 months prior to admission.

3. Nonetheless, VHA agrees that excellent care of hospitalized elderly Veterans warrants attention to cognitive function, and is making strides in ensuring that appropriate screening is completed. The Office of Geriatrics and Extended Care (GEC), within the Office of Patient Care Services, works with other program offices and with facility staff to provide expertise and leadership in the care of elderly Veterans. For over 2 years, GEC has been actively advised by a DSC. To ensure that appropriate cognitive assessment for a greater proportion of elderly hospitalized Veterans during hospitalization or prior to admission, GEC will collaborate with the Office of Nursing Services (ONS) to determine what aspect(s) of cognitive function: 1) are part of a customary, comprehensive nursing assessment of patients upon admission to hospital; 2) will be documented in an upcoming standardized admission template for nursing assessment; and 3) if any additional aspects of cognitive function should be included in the new standardized admission template. Further, GEC will obtain additional input from the VA National Center for Health Promotion and Disease Prevention and VHA to ensure consistency with related guidance that is currently being developed by those groups on related issues of dementia screening and use of dementia warning signs. Once the new, standardized nursing admission template is implemented, GEC and ONS will monitor data on documentation of cognitive function; and determine whether changes to the template, or other further action, is warranted. Any recommended changes in policy and practice will be provided to me for consideration.

4. Thank you for the opportunity to review the report and provide comments. I would be pleased to discuss any concerns or comments you may have about this response. If you have any questions, please have a member of your staff contact Margaret Seleski, Director, Management Review Service (10B5) at (202) 461-7245.

(original signed by:)
Gerald M. Cross, MD, FAAFP

Attachment

VETERANS HEALTH ADMINISTRATION
Additional Comments Related to Recommendations in OIG Draft Report, Healthcare Inspection, Hospitalized Community-Dwelling Elderly Veterans: Cognitive and Functional Assessments and Follow-up after Discharge, (WebCIMS447143)

Date of Report: December 17, 2009

OIG Recommendation

We recommended that the Under Secretary for Health develop and implement a plan to ensure that vulnerable elders admitted to hospitals have a documented assessment of cognitive functioning.

VHA Comments

Concur

VHA's Office of Geriatrics and Extended Care (GEC) will collaborate with the Office of Nursing Service (ONS) to determine the following:

1. What aspect(s) of cognitive function are part of a customary, comprehensive nursing assessment of patients upon admission to hospital.
2. What aspect(s) of cognitive function will be documented in the new, standardized admission template for nursing assessment that is currently being developed by ONS.
3. Whether any additional aspect(s) of cognitive function should be included in the new, standardized nursing admission template as new scientific findings come to light.

GEC will obtain additional input on the determination in "3." above from the VA National Center for Health Promotion and Disease Prevention and the VHA Dementia Steering Committee, to ensure consistency with related guidance that is currently being developed by those groups on the related issues of dementia screening and use of dementia warning signs.

Once the new, standardized nursing admission template is implemented, GEC and ONS will monitor data on documentation of cognitive function; will determine whether changes to the template or other further action is warranted; and will provide the Under Secretary for Health with any recommendation for change in policy and practice on this matter.

The anticipated completion date for this action will depend on when the new nursing admission template is implemented. Review of local or national documentation data will occur by October 2010 if the national roll-out and implementation of the Inpatient Assessment Template occurs in May 2010, as currently projected. However, if implementation of the Template is delayed, then data will be reviewed within 6 months of Template deployment.

In process October 2010

Veterans Health Adminstration
December 2009

Appendix C

OIG Contact and Staff Acknowledgments

OIG Contact	Audrey Collins-Mack, RN (404) 929-5944
Acknowledgments	Lisa Barnes, LMSW Jerome E. Herbers, Jr., MD Wilma Reyes, MD Prabu Selvam, MHS Kathleen Shimoda, RN Marilyn Walls, RN Susan Zarter, RN

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