



Office of Inspector General

Evaluation of Medical Center Investment in Ambulatory Care Infrastructure

Significant efforts were made to reduce inpatient infrastructure and increase ambulatory care infrastructure, but cost accounting data was not adequate to identify and quantify the sources of funding used for investment in infrastructure.

Report No: 9AY-A19-078
Date: March 31, 1999

Office of Inspector General
Washington DC 20420



DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington DC 20420

Memorandum to the Under Secretary for Health (10)

**Evaluation of Medical Center Investment
in
Ambulatory Care Infrastructure**

1. The Under Secretary for Health requested that the Office of Audit conduct an evaluation to determine whether savings that resulted from reductions in inpatient care infrastructure during the period Fiscal Year (FY) 1994 through FY 1998 were reinvested in ambulatory care infrastructure. Additionally, the Under Secretary requested our views regarding the utility of cost information held in Veterans Health Administration (VHA) databases and our suggestions for improving cost data collection and cost reporting systems. The evaluation was made at selected VA medical centers to assess: (1) inpatient and outpatient workload, (2) resource utilization, (3) development of medical center and community-based outpatient infrastructure, and (4) management cost data used in reporting resource utilization.

2. Reliable information was not available to determine savings from inpatient infrastructure reductions and the use of any such savings to increase ambulatory care infrastructure. Management reports show that during the period reviewed, inpatient workload fell 64 percent, 44 percent of operating beds were closed, inpatient staffing was reduced 28 percent, and outpatient workload increased 46 percent. Additionally, significant investment in campus and community based ambulatory care infrastructure took place at each medical center visited. The significant scope of change was confirmed by direct observation of conditions at the five medical centers reviewed, but shortcomings in cost data prevented us from quantifying the amount of inpatient resources that were reinvested in new ambulatory care infrastructure.

3. Regarding the utility of VHA cost information systems, our evaluation found that:

- VHA's cost accounting system, the Cost Distribution Report (CDR), is not sufficiently reliable to quantify the reinvestment of inpatient infrastructure savings in ambulatory care infrastructure, and
- The Decision Support System, VHA's successor cost accounting system to the CDR, has the potential to provide more useful and reliable data on the cost of providing services.

4. The utility of CDR data for assessment of resource utilization was diminished by the variety of methodologies used to allocate costs, both among and within medical centers. The CDR allocates costs to organizational entities primarily based on estimations of the distribution of staff time to activities associated with the entity. All other costs are generally distributed in the same proportion as staff time. We found that service level managers had broad discretion in selecting and applying cost allocation techniques, leading to inconsistency, infrequent updates, and disparate treatment of similar cost accounting issues. Additionally, management and staff at the medical centers visited told us that in recent years, less managerial oversight was being given to the CDR and greater attention was being given to implementation of the Decision Support System (DSS). This shift in managerial focus further diminishes the reliability and accuracy of the CDR.

5. When fully implemented, DSS will allocate costs to specific episodes of healthcare based on calculations of the amount of resources consumed in providing the care. Since DSS costs are allocated both to discrete final work outputs, and to organizational entities, DSS has the potential to provide more useful data on the cost of providing services, which can help VA managers identify organizational inefficiencies and their causes. Additionally, we believe DSS can provide more consistent and reliable data because it is based on the calculated cost of outputs, rather than perceptions of the distribution of staff time.

6. We have been informed that VHA plans to run CDR in parallel with DSS, for the foreseeable future. Since the focus of field staff has already begun to shift to DSS, VHA management should consider providing supplemental direction and guidance to ensure appropriate and consistent allocation of costs if VHA will continue to rely on the CDR for corporate cost accounting.

7. The Under Secretary for Health agreed with our conclusions and reported that a work group has been established to develop an action plan for replacement of the CDR. He also stated that further study would be conducted of the relational consistencies of inpatient and outpatient costs through time. We believe these are appropriate steps to improve managerial cost accounting in VHA.

For the Assistant Inspector General for Auditing,

(Original signed by:)

JOHN S. BILOBRAN
Director, Planning and Operational Support Division

Table of Contents

	Page
Memorandum to the Under Secretary for Health (10)	i
 Findings and Conclusions	
Ambulatory Care was Expanded and the Number of Unique Veterans Served Increased.....	1
Conclusions	13
 Appendices	
I. Objectives, Scope, and Methodology	15
II. Under Secretary for Health Comments	17
III. Final Report Distribution	18

FINDINGS AND CONCLUSIONS

Ambulatory Care was Expanded and the Number of Unique Veterans Served Increased

Management information shows that more veterans are now receiving care through ambulatory care services and the number of unique veterans served substantially increased during the period FY 1994 through FY 1998. The shift in the delivery of medical care was noted through direct observation of: (1) changes in workload, (2) resource utilization, and (3) new ambulatory care infrastructure. For example, during the period FY 1994 through FY 1998 the number of veterans served increased at the five medical centers reviewed:

Workload

- The number of veterans served rose 41 percent, from 100,455 to 141,557 unique patients¹.
- Inpatient workload as measured by bed days of care fell 64 percent,² from 705,920 days of care in 1994 to 254,241 in 1998. Workload including Nursing Home and Domiciliary care fell 38 percent, from 1,059,864 to 660,218 days of care.
- Outpatient workload increased 46 percent, rising from 926,848 to 1,353,429 outpatient visits annually.

Table 1

UNIQUE PATIENTS SERVED

	1994	1995	1996	1997	1998
LAKE CITY	17,085	18,133	19,160	20,858	22,445
LOMA LINDA	24,786	25,428	27,080	28,468	30,230
CONNECTICUT HEALTH CARE SYSTEM	19,124	30,504	32,013	32,238	33,495
DUBLIN	10,690	11,519	12,166	13,638	14,654
NEW JERSEY HEALTH CARE SYSTEM	28,770	29,894	38,209	39,451	40,733
Total	100,455	115,478	128,628	134,653	141,557

¹ Includes two division medical centers. Unless otherwise noted, workload data for separate medical centers was combined for periods prior to integration, to give proper perspective to workload trends.

² Medical, Surgical, and Psychiatric

Table 2

MEDICAL BED DAYS OF CARE*

	1994	1995	1996	1997	1998
LAKE CITY	58,444	53,426	43,438	30,604	30,770
LOMA LINDA	37,914	32,874	33,320	19,144	16,285
CONNECTICUT HEALTH CARE SYSTEM	33,484	25,135	21,275	33,254	14,364
DUBLIN	41,009	38,229	36,029	31,267	25,895
NEW JERSEY HEALTH CARE SYSTEM	180,751	186,812	161,877	120,146	83,046
Total	351,602	336,476	295,939	234,415	170,360

*Includes rehabilitation, intermediate medical, spinal cord injury, medical intensive care unit, and neurology beds

Table 3

SURGICAL BED DAYS OF CARE

	1994	1995	1996	1997	1998
LAKE CITY	7,976	7,059	3,904	1,610	1,412
LOMA LINDA	14,688	10,122	11,177	7,235	7,022
CONNECTICUT HEALTH CARE SYSTEM	15,349	14,444	11,727	9,173	9,874
DUBLIN	4,374	3,098	2,104	1,047	1,675
NEW JERSEY HEALTH CARE SYSTEM	25,697	22,361	16,500	10,711	9,335
Total	68,084	57,084	45,412	29,776	29,318

Table 4

PSYCHIATRIC BED DAYS OF CARE

	1994	1995	1996	1997	1998
LAKE CITY	14,057	13,551	11,526	3,578	3,702
LOMA LINDA	19,025	17,336	12,555	6,703	6,075
CONNECTICUT HEALTH CARE SYSTEM	63,173	51,550	31,311	13,591	9,474
DUBLIN	18,248	17,887	12,777	3,850	3,530
NEW JERSEY HEALTH CARE SYSTEM	171,731	147,962	140,582	112,383	94,782
Total	286,234	248,286	208,751	140,105	117,563

Table 5

NURSING HOME BED DAYS OF CARE

	1994	1995	1996	1997	1998
LAKE CITY	41,874	47,615	62,904	64,692	69,513
LOMA LINDA	34,557	32,861	31,559	32,521	36,963
CONNECTICUT HEALTH CARE SYSTEM	30,563	27,735	24,496	11,010	13,016
DUBLIN	39,744	39,272	37,399	35,336	35,806
NEW JERSEY HEALTH CARE SYSTEM	101,835	103,295	100,375	101,049	103,377
Total	248,573	250,778	256,733	244,608	258,675

Table 6

DOMICILIARY BED DAYS OF CARE

	1994	1995	1996	1997	1998
LAKE CITY	0	0	0	0	0
LOMA LINDA	0	0	0	0	0
CONNECTICUT HEALTH CARE SYSTEM	0	0	0	0	0
DUBLIN	83,115	80,129	74,303	51,925	56,613
NEW JERSEY HEALTH CARE SYSTEM	22,256	24,455	27,455	28,003	27,689
Total	105,371	104,584	101,758	79,928	84,302

Table 7

INPATIENT SURGICAL PROCEDURES

	1994	1995	1996	1997	1998
LAKE CITY	1,332	1,378	1,229	450	340
LOMA LINDA	2,140	1,417	1,328	1,109	1,018
CONNECTICUT HEALTH CARE SYSTEM	1,625	1,277	1,145	1,070	1,060
DUBLIN	880	570	397	248	211
NEW JERSEY HEALTH CARE SYSTEM	2,305	1,822	1,296	1,207	912
Total	8,282	6,464	5,395	4,084	3,541

Table 8

OUTPATIENT SURGICAL PROCEDURES

	1994	1995	1996	1997	1998
LAKE CITY	760	780	649	1,824	2,380
LOMA LINDA	2	780	1,075	1,355	1,342
CONNECTICUT HEALTH CARE SYSTEM	1,391	1,079	1,390	1,585	1,566
DUBLIN	1,547	1,581	2,447	4,707	4,901
NEW JERSEY HEALTH CARE SYSTEM	529	555	1,128	1,353	1,394
Total	4,229	4,775	6,689	10,824	11,583

Table 9

OUTPATIENT VISITS *

	1994	1995	1996	1997	1998
LAKE CITY	89,620	96,688	110,392	127,866	145,680
LOMA LINDA	198,185	207,068	230,373	253,774	284,321
CONNECTICUT HEALTH CARE SYSTEM	257,762	285,536	325,164	359,170	418,556
DUBLIN	74,404	75,077	87,307	105,973	110,527
NEW JERSEY HEALTH CARE SYSTEM	306,877	343,368	362,081	378,594	394,345
Total	926,848	1,007,737	1,115,317	1,225,377	1,353,429

* Campus based Ambulatory Care clinics carried the bulk of the outpatient workload. In FY 1998, campus based ambulatory care clinics provided 1,248,896 outpatient visits (92 percent of total visits) and CBOCs and SOCs provided 104,533 patient visits.

Operating Costs

During the period FY 1994 through FY 1998, operating costs increased \$73.2 million at the five facilities reviewed, from \$634.7 million to \$707.9 million (11.5 percent). Costs attributed to inpatient care decreased \$70.4 million (15 percent) while costs attributed to outpatient care increased \$143.8 million (92 percent). Overall staffing decreased 1,158 FTEE (13 percent).

Funding for VAMCs Lake City, Loma Linda, Dublin, and the Connecticut Health Care System (CHCS) increased 20 percent during the period. Management reported that the funding was adequate to meet operating expenses and invest in new infrastructure.

Funding for the New Jersey Health Care System (NJHCS) decreased one percent as part of VHA's efforts to move funding from medical centers that have decreasing workload to medical centers with increasing workload.

While funding for the CHCS and NJHCS has been sufficient to meet salaries and other operating expenses, management reported that reduction-in-force authority is needed in FY 1999 to properly align staffing with workload and funding. Management at the CHCS later reported that the network reallocated funds to meet FY 1999 needs.

Table 10

TOTAL COST OF MEDICAL CENTER OPERATIONS (Millions)

	1994	1995	1996	1997	1998
LAKE CITY	\$55.1	\$63.2	\$64.5	\$68.9	\$71.5
LOMA LINDA	\$109.3	\$112.8	\$113.4	\$117.2	\$132.2
CONNECTICUT HEALTH CARE SYSTEM	\$148.7	\$157.1	\$152.9	\$157.8	\$169.5
DUBLIN	\$54.9	\$56.9	\$58.5	\$62.0	\$69.8
NEW JERSEY HEALTH CARE SYSTEM	\$266.7	\$266.9	\$275.3	\$274.3	\$264.9
Total	\$634.7	\$656.9	\$664.6	\$680.2	\$707.9

Table 11

COST OF INPATIENT OPERATIONS (Millions)

	1994	1995	1996	1997	1998
LAKE CITY	\$39.6	\$45.0	\$43.3	\$43.6	\$43.3
LOMA LINDA	\$69.1	\$70.0	\$66.7	\$61.7	\$65.1
CONNECTICUT HEALTH CARE SYSTEM	\$105.0	\$115.9	\$99.8	\$82.5	\$75.4
DUBLIN	\$42.0	\$41.7	\$42.1	\$40.7	\$44.5
NEW JERSEY HEALTH CARE SYSTEM	\$205.8	\$196.2	\$190.5	\$178.3	\$162.8
Total	\$461.5	\$468.8	\$442.4	\$406.8	\$391.1

Table 12

COST OF OUTPATIENT OPERATIONS (Millions)

	1994	1995	1996	1997	1998
LAKE CITY	\$13.7	\$16.2	\$19.0	\$23.4	\$26.0
LOMA LINDA	\$33.9	\$37.3	\$42.6	\$50.2	\$60.8
CONNECTICUT HEALTH CARE SYSTEM	\$43.7	\$41.2	\$53.1	\$75.4	\$94.1
DUBLIN	\$11.3	\$13.5	\$14.7	\$18.7	\$22.6
NEW JERSEY HEALTH CARE SYSTEM	\$53.0	\$62.7	\$72.4	\$89.2	\$95.9
Total	\$155.6	\$170.9	\$201.8	\$256.9	\$299.4

Table 13

OVERALL FTEE

	1994	1995	1996	1997	1998
LAKE CITY	894	957	956	939	941
LOMA LINDA	1,312	1,328	1,282	1,263	1,244
CONNECTICUT HEALTH CARE SYSTEM	2,112	2,079	2,010	1,878	1,841
DUBLIN	837	824	804	750	773
NEW JERSEY HEALTH CARE SYSTEM	3,817	3,718	3,520	3,154	3,015
Total	8,972	8,906	8,572	7,984	7,814

Reduction in Inpatient Infrastructure

Operating beds fell 44 percent, from 3,703 beds in FY 1994 to 2,060 beds in FY 1998. Staffing attributed to inpatient care fell 28 percent, from 6,748 FTEE in FY 1994 to 4,832 FTEE in FY 1998.

- Staffing was reduced 3 percent at the 3 medical centers located in the southeast and west, decreasing from 3,043 full time equivalent employees (FTEE) to 2,958. At the 2 health care systems reviewed in the northeast, staffing was reduced 18 percent, decreasing from 5,929 to 4,856 FTEE.

Table 14

TOTAL OPERATING BEDS

	1994	1995	1996	1997	1998
LAKE CITY	392	446	400	343	313
LOMA LINDA	395	379	379	231	203
CONNECTICUT HEALTH CARE SYSTEM	649	541	541	302	210
DUBLIN	692	633	526	443	367
NEW JERSEY HEALTH CARE SYSTEM	1,575	1,566	1,454	1,197	967
Total	3,703	3,565	3,300	2,516	2,060

Table 15

SERVICE OPERATING BEDS

	1994	1995	1996	1997	1998
Medical Wards	668	608	545	398	309
Intermediate Wards	423	461	431	276	193
Neurology Wards	67	57	56	33	17
Rehabilitation	65	65	57	20	7
Surgical	322	299	213	140	101
Psychiatric	935	836	749	457	283
Spinal Cord	25	25	25	25	14
Blind	43	43	43	45	45
SICU/MICU	7	7	7	7	7
Nursing Home	734	782	782	764	751
PRRTP	0	12	37	54	92
Domiciliary	414	370	355	297	241
Total	3,703	3,565	3,300	2,516	2,060

Table 16

INPATIENT FTEE

	1994	1995	1996	1997	1998
LAKE CITY	689	755	717	667	639
LOMA LINDA	877	877	824	724	823
CONNECTICUT HEALTH CARE SYSTEM	1,466	1,485	1,303	963	781
DUBLIN	671	648	618	550	554
NEW JERSEY HEALTH CARE SYSTEM	3,045	2,839	2,586	2,180	2,035
Total	6,748	6,604	6,048	5,084	4,832

Ambulatory Care Infrastructure

As a consequence of the reduction in inpatient infrastructure, additional staff could be allocated to outpatient care. The investment in outpatient infrastructure took three forms: increased FTEE, renovated and new campus based ambulatory care facilities, and new community-based outpatient clinics.

Increased Outpatient Staffing

While overall staffing was reduced, outpatient FTEE increased 51 percent from 1,852 FTEE in FY 1994 to 2,804 FTEE in FY 1998. The increase in outpatient FTEE occurred primarily in campus-based ambulatory care.

Table 17

OUTPATIENT FTEE

	1994	1995	1996	1997	1998
LAKE CITY	177	175	205	251	273
LOMA LINDA	360	386	416	479	481
CONNECTICUT HEALTH CARE SYSTEM	524	463	575	784	927
DUBLIN	149	155	165	172	194
NEW JERSEY HEALTH CARE SYSTEM	642	755	815	903	929
Total	1,852	1,934	2,176	2,589	2,804

Table 18

ALLOCATION OF FTEE

	LAKE CITY	LOMA LINDA	CHCS	DUBLIN	NJHCS
Increase in FTEE Allocated to Campus-Based Ambulatory Care Since 1994	83 (47%)	127 (35%)	195 (37%)	46 (31%)	287 (45%)
VA FTEE Allocated to CBOCs and SOCs Opened Since 1994	6	0	6	0	16
Contractor FTEE for CBOCs and SOCs Opened Since 1994	0	14	0	18	0

Investment in Outpatient Facilities

Increased staffing for outpatient care was complemented with new facilities. New campus-based ambulatory care space was acquired through renovation or new construction at all of the facilities reviewed. Between FY 1994 and FY 1998, 30 projects totaling \$5.4 million were completed and 31 projects costing \$118.7 million are currently ongoing or planned.

In addition, space was leased or obtained through sharing agreement to open 10 CBOCs and Screening Outpatient Clinics (SOCs) between FY 1994 and FY 1998. In FY 1998, these facilities provided 104,533 outpatient visits.

Table 19

OUTPATIENT FACILITIES OPENED FY 1994 TO FY 1998

	LAKE CITY	LOMA LINDA	CHCS	DUBLIN	NJHCS
Campus-Based Ambulatory Care Renovation & Construction Since 1994	Yes	Yes	Yes	Yes	Yes
VA Staffed CBOCs and SOCs Opened Since 1994	1	No	3	No	2
Contractor Staffed CBOCs and SOCs Opened Since 1994	No	2	No	2	No

Table 20

PLANNED FUTURE INVESTMENT IN OUTPATIENT FACILITIES

	LAKE CITY	LOMA LINDA	CHCS	DUBLIN	NJHCS
On-going Construction of Campus-based Ambulatory Care	Yes	Yes	Yes	Yes	Yes
Planned VA Staffed CBOCs and SOCs	Yes	No	Yes	No	Yes
Planned Contractor Staffed CBOCs and SOCs	No	Yes	No	No	No

Validity and Reliability of Management Information

Cost Distribution Report

Inconsistent application of cost allocation methodology and sporadic or untimely updating of cost distributions diminished the utility of the CDR.

- CDR cost allocations were frequently based on planned rather than actual allocation of resources and workload and/or was based on the recollection of staff regarding time spent in various activities.
- Medical centers used inconsistent methodologies to allocate costs for similar functions or activities.
- Little effort was made to separately allocate personal services and all other costs.
- The addition of new or amended reporting categories changed the way data was collected, and the integration of databases due to the merger of medical facilities added uncertainty to the reliability of the resulting management information.
- Although bed services such as psychiatry, medical, and surgical services made the most significant shifts in resources to outpatient care, they were also less likely to update their allocation of costs.

Specific allocations of FTEE, personnel costs, and all other costs, were required in some cases, but most services allocated all costs (personnel and/or all other costs) based on the perceived distribution of staff time between inpatient and outpatient care. The likely result of this practice is that "all other" outpatient costs are over-reported and "all other" inpatient costs are underreported.

In other cases, costs were allocated based on the incidence of service outputs, for example, the incidence and distribution of tests. Others used allocation conventions based on workload factors such as square feet of space cleaned or pounds of laundry washed. While many of these conventions were reasonable and appropriate, some may not have been the best choice for the purpose.

The following are examples of some of the conditions observed.

Building Management Service (Facilities/Environmental Management) - One facility distributed all costs based on the square footage assigned to each service at the medical center. Two facilities distributed costs based on specific workload indicators pertinent to the environmental program involved. For example:

- Square footage was used to assign costs for pest management, waste management, and interior design.
- Pounds of linen were the basis for distributing costs associated with linen programs.
- Man-hours were the basis for computing sanitation services.
- Numbers of beds were used to develop the costs associated with the patient assistance program.

Pathology and Laboratory Medicine Service - One facility distributed costs based on the distribution of four specific laboratory tests between inpatient and outpatient care. Using this methodology, 63 percent of FY 1998 costs were allocated to outpatient care and 37 percent to inpatient care.

At the other facilities reviewed, all laboratory tests reported by the automated workload reporting system were used to determine the distribution of costs. If this methodology were used by the first medical center, 75 percent of operating costs would have been allocated to outpatient care and 25 percent to inpatient care.

Surgical Service - At one facility, the distribution of CDR costs had not been adjusted since 1995, although substantial change in workload and resources occurred during the period 1996 to 1998. Guidance for adjustment of CDR allocations states that the distributions should be updated annually and more frequently when workload and resource changes occur.

These conditions occurred because service level managers had broad discretion to determine what methodology to use to allocate resources and to determine the frequency with which they revised CDR allocations. Where direction existed, such as policy regarding when or how often to submit adjustments and updates, there was frequent deviation or noncompliance.

Medical center staff also indicated that there was inattention to the CDR because DSS was seen as the way of the future. Some CDR coordinators stated that emphasis on improved reporting made current data more reliable than data from FYs 1994 and 1995, but more training was needed to further improve reporting.

Decision Support System

Effective November 12, 1998, the DSS was designated as VHA's cost accounting system. However, the Office of VHA's Chief Financial Officer informed us that VHA would continue to operate the CDR in parallel with DSS and will likely continue to rely upon the CDR to conduct cost accounting for the foreseeable future. To our knowledge, a date has not been established to transition cost accounting exclusively to DSS.

All five medical centers reported that their DSS databases were populated with data from mid-FY 1997 through FY 1998 - some were populated with earlier data and some were incomplete. Two medical centers reported that they were continuing to integrate and consolidate data as a consequence of either mergers with other medical centers or reorganization into business service lines. All five medical centers were continuing to validate data.

None of the medical centers made significant use of DSS to produce reports for management information purposes. The DSS coordinators at the medical centers reviewed indicated that they needed more time to complete data input, validate data, or to become proficient in DSS capabilities.

Conclusions

Our evaluation found that during the period FY1994 through FY 1998, inpatient workload fell 64 percent, 44 percent of operating beds were closed, inpatient staffing was reduced 28 percent and outpatient workload increased 46 percent. Additionally, significant investment in campus and community based ambulatory care infrastructure took place at each medical center visited.

Regarding the utility of VHA cost information systems, we concluded that: (1), the CDR, was not sufficiently reliable to quantify the reinvestment of inpatient infrastructure savings in ambulatory care infrastructure, and (2) DSS has the potential to provide more useful and reliable data on the cost of providing services.

No recommendations were made, however, we suggested that management provide supplemental direction and guidance for collection and reporting of workload and cost data to the CDR, pending full implementation of DSS.

Under Secretary for Health Comments

The Under Secretary for Health agreed with our conclusions. He stated that a work group has been established to develop an action plan for replacement of the CDR. He also indicated that further study would be conducted of the relational consistencies of inpatient and outpatient costs through time. (See Appendix II, page 17 for the full text of the Under Secretary's comments)

Office of Inspector General Comments

The Under Secretary for Health agreed with our findings and conclusions. We believe he is taking the appropriate steps to improve managerial cost accounting in VHA. We consider all issues resolved.

OBJECTIVES SCOPE, AND METHODOLOGY

Objective

The Office of Audit conducted evaluations at selected VA medical centers to assess inpatient and outpatient workload and resources, medical center and community-based outpatient infrastructure, and operational data contained in the CDR. The Under Secretary for Health requested the evaluation to determine whether savings resulting from reductions in inpatient care infrastructure during the period FY 1994 through 1998 were reinvested in ambulatory care infrastructure. Additionally, the Under Secretary requested our views regarding the utility of cost information held in VHA databases and our suggestions for improvement of management cost data collection and reporting systems.

Scope and Methodology

We conducted interviews with VHA management officials and employees to obtain an understanding of the steps taken to: (1) reduce inpatient infrastructure, integrate facilities, and expand access points, and (2) develop and implement the CDR and DSS. Officials of Veterans Integrated Service Network 5, provided an overview of lessons learned in the restructuring of VA medical centers in the Baltimore area.

We reviewed selected workload, cost, and performance data for 15 medical centers suggested for evaluation by the Under Secretary for Health. From among these 15 medical centers, 5 were selected for detailed evaluation. On-site reviews were conducted during the period October 26 - December 11, 1998, at:

- VAMC Lake City, FL
- Jerry L. Pettis Memorial Medical Center in Loma Linda, CA
- The Connecticut Health Care System (CHCS), West Haven and Newington Divisions
- The New Jersey Health Care System (NJHCS), East Orange and Lyons Divisions
- Carl Vinson Medical Center in Dublin, GA

We consulted with staff of the Decision Support System Development Center in Bedford, MA; the Allocation Resource Center in Boston, MA; and DSS coordinators at the five medical centers visited during the review. These staff informed us that DSS data was not available for the full period FY 1994 through FY 1998, and local DSS staff were reluctant to generate reports from DSS because they were still validating data. Accordingly, we relied on CDR data, supplemented by on-site observation and interview, to assess the degree to which inpatient resources had been reinvested in outpatient infrastructure.

DSS was implemented in six phases. Phase 1 medical centers began implementation in May 1994 and Phase 6 medical centers began implementation in March 1997. The medical centers reviewed during this project were among the last to begin implementation of DSS.

DSS IMPLEMENTATION

Medical Center	Implementation Stage
LAKE CITY	4
LOMA LINDA	4
CONNECTICUT HEALTH CARE SYSTEM	5
DUBLIN	6
NEW JERSEY HEALTH CARE SYSTEM	6

We made the evaluation in accordance with generally accepted government auditing standards for staff qualifications, independence, and due professional care, and fieldwork standards for planning, supervision, and evidence. We did not test internal controls or perform substantive procedures to validate the reliability of data held in management information systems.

Under Secretary for Health Comments**Department of
Veterans Affairs****Memorandum**

From: Under Secretary for Health (10/105E)

Subj: OIG Draft Report, Evaluation of Medical Center Investment in Ambulatory Care
Infrastructure (EDMS Folder 42748)

To: Assistant Inspector General for Auditing (52)

1. The appropriate program offices have reviewed the draft report and we agree with your conclusions. While we are pleased that your observations confirm the reported decrease in inpatient workload and staffing along with the significant increase in ambulatory care workload and investment in infrastructure at both VA and community-based locations, it is unfortunate that due to inconsistencies in our cost information databases that you were unable to quantify the inpatient resources reinvested or redirected from these savings. We agree that the Decision Support System (DSS) has the potential to provide this information; however, we are not yet able to realize such benefit from the system. Our network, finance and information technology offices continue to work to develop this potential. For instance, they have formed a workgroup tasked with identifying and prioritizing critical information issues (e.g., CDR replacement; non-VA care workload; full cost requirements; revenue modeling; and, VERA enhancement) in order to develop an action plan.
2. In the meantime, we hope to build on the foundation your study provides. The Office of Policy and Planning is undertaking a study to attempt to determine what, if any, relational consistencies may be identified through a comparison of inpatient versus outpatient costs over time. We recognize that the cost information may not be completely accurate; however, any trends that might be identified could prove useful, especially for those facilities experiencing significant reductions in inpatient census. We plan on sharing this information with you when it is available.
3. Thank you for the opportunity to review the draft report. I appreciate your prompt and professional response to my request. If you have any questions please contact Paul C. Gibert, Jr., Director, Management Review and Administration Service (105E), Office of Policy and Planning at 202.273.8360.

(//Original signed by Thomas Garthwaite for://)
Kenneth W. Kizer, M.D., M.P.H.

Final Report Distribution

VA DISTRIBUTION

Under Secretary for Health (105E)

Chief Network Officer (10N)

Directors:

VAMC Lake City, FL (573)

Jerry L. Pettis Memorial Medical Center in Loma Linda, CA

The Connecticut Health Care System (CHCS)

The New Jersey Health Care System (NJHCS)

Carl Vinson Medical Center in Dublin, GA (557)