

AD-A256 279



VRI-DMIS-2.60 WP92-1

R. Droppleman

J. A. Lee

11 February 1992

①

DRAFT
FOR REVIEW AND DISCUSSION
SUBJECT TO CHANGE

DTIC

FILED
OCT 2 1992

C

**ENHANCEMENTS TO THE DRG-BASED RESOURCE
ALLOCATION METHODOLOGY TO ADDRESS
MILITARY PERSONNEL REQUIREMENTS**

92 11 11 13

390115

92-26339



VECTOR RESEARCH, INCORPORATED

P.O. Box 1506
Ann Arbor, Michigan 48106
(313) 973-9210

901 S. Highland Street
Arlington, Virginia 22204
(703) 521-5300

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 11 February 1992	3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE ENHANCEMENTS TO THE DRG-BASED RESOURCE ALLOCATION METHODOLOGY TO ADDRESS MILITARY PERSONNEL REQUIREMENTS			5. FUNDING NUMBERS MDA903-88-C-0147	
6. AUTHOR(S) Vector Research, Incorporated Task Order Proponent: Stuart W. Baker, LTC, MS, USA				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) VECTOR RESEARCH, INCORPORATED P.O. Box 1506 Ann Arbor, MI 48106 901 S. Highland Street Arlington, VA 22204			8. PERFORMING ORGANIZATION REPORT NUMBER VRI-DMIS-2.60 WP92-1	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) OASD/HA/HSO/RAMS 3 Skyline Place, Suite 1507 5201 Leesburg Pike Falls Church, VA 22041-3203			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for Public Release: Distribution is Unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This report presents a method for incorporating military personnel expenditures within the Diagnosis Related Group (DRG) based resource allocation methodology to support OASD (HA) financial management and monitoring. The current methodology provides estimates of Operation and Maintenance (O&M) expenses, excluding military personnel expenditures, within Program Element Codes (PECs) 0807711 (Care in Regional Defense Facilities) and 0807792 (Station Hospitals/Clinics). A straight-forward technique for including military personnel expenditures within the current resource allocation methodology is developed and documented in this paper. It is anticipated that further enhancements to include other PECs will be addressed at a later date.				
14. SUBJECT TERMS MILPERS/MEPRS Expense; O&M Expenses; PECs			15. NUMBER OF PAGES 33	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL	

FOREWORD

This report presents a method for incorporating military personnel expenditures within the DRG-based resource allocation methodology to support OASD(HA) financial management and monitoring. The current methodology provides estimates of operation and maintenance (O&M) expenses, excluding military personnel expenditures, within program element codes (PECs) 0807711 - Care in Regional Defense Facilities and 0807792 - Station Hospitals/Clinics. A straightforward technique for including military personnel expenditures within the current resource allocation methodology is developed and documented in this paper. It is anticipated that further enhancements to include other program element codes will be addressed at a later date. This report was prepared under contract MDA903-88-C- 0147. Questions or comments regarding this document should be directed to LTC Stuart Baker, OASD(HA) Resource Analysis and Management Systems, (703) 756-1918.

DTIC QUALITY INSPECTED 3

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Date	
DTIC	
A-1	

CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION AND EXECUTIVE SUMMARY	1-1
1.1 Executive Summary	1-3
2.0 CORRELATION BETWEEN O&M PLUS MILPERS EXPENSES AND MEPRS EXPENSE	2-1
3.0 DISTRIBUTION OF THE O&M PLUS MILPERS MULTIPLIER	3-1
4.0 COMPARISON OF OBSERVED AND ESTIMATED O&M AND MILPERS EXPENSES	4-1

LIST OF EXHIBITS

<u>Number</u>	<u>Title</u>	<u>Page</u>
1-1	Correlation Matrix for Observed FY88 O&M Plus MILPERS Expenses to FY88 Observed MEPRS Expenses	1-4
2-1	Army FY88 Observed O&M Plus MILPERS Expenses Versus Observed MEPRS Expenses	2-2
2-2	Navy FY88 Observed O&M Plus MILPERS Expenses Versus Observed MEPRS Expenses	2-3
2-3	USAF FY88 Observed O&M Plus MILPERS Expenses Versus Observed MEPRS Expenses	2-4
2-4	FY88 USAF Observed O&M Plus MILPERS Expenses Versus Observed MEPRS Expenses, Not Including Wiesbaden, Brooke, or Wilford Hall	2-5
2-5	Correlation Matrix for Observed FY88 O&M Plus MILPERS Expenses to FY88 Observed MEPRS Expenses	2-7
3-1	Histogram of FY88 Army O&M and MILPERS Multiplier Values	3-2
3-2	FY88 Army O&M and MILPERS Multiplier by Facility Type	3-3
3-3	Histogram of FY88 Navy O&M and MILPERS Multiplier Values	3-5
3-4	FY88 Navy O&M and MILPERS Multiplier by Facility Type	3-6
3-5	Histogram of FY88 USAF O&M and MILPERS Multiplier Values	3-7
3-6	FY88 USAF O&M and MILPERS Multiplier by Facility Type	3-8
4-1	FY88 Army Estimated and Observed O&M and MILPERS Expenses	4-2
4-2	FY88 Navy Estimated and Observed O&M and MILPERS Expenses	4-3
4-3	FY88 USAF Estimated and Observed O&M and MILPERS Expenses	4-4

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

This report documents a technique for incorporating military personnel expenses into the DRG-based resource allocation methodology. Previously developed models used for estimating expenses are discussed in detail in **Development of Cost Models to Support Diagnosis Related Management**.¹ The current methodology uses FY88 observed Medical Expense and Performance Reporting System (MEPRS) inpatient clinician, inpatient nonclinician, and ambulatory expenses (less occupational health and PRIMUS/NAVCARE expenses), and FY88 observed operation and maintenance (O&M) expenses within program element codes (PECs) 0807711 - Care in Regional Defense Facilities and 0807792 - Station Hospitals/Clinics from the Service financial data to project future O&M expenditures. Note that expenses as reported in the FY88 Service financial data were used to represent O&M and military personnel (MILPERS) expenditures for Army and Air Force facilities. Due to data incompleteness, however, obligations were used to represent O&M requirements and expenses were used to represent military personnel expenditures at Navy facilities. O&M expenses include civilian personnel, contract, supply, and other expenses, but exclude military personnel expenditures. The purpose of this document is to present a straightforward technique for including military personnel expenditures within the methodology while maintaining the general structure of the current methodology. Additionally, the impact of incorporating these expenses within the model is reviewed.

The technique selected for including military personnel expenditures within the resource allocation methodology required four steps for implementation:

¹DMIS-2.60 WP91-1(R), Vector Research, Incorporated, 7 November 1991.

- (1) compute FY88 total expenses, including O&M and military personnel expenditures, for each facility as reported within the FY88 Service financial data;
- (2) compute total FY88 MEPRS inpatient clinician, inpatient non-clinician, and ambulatory expenses for each facility as reported in the MEPRS data;
- (3) compute an O&M and MILPERS multiplier for each facility by dividing total expenses as computed in step 1 by the MEPRS expenses computed in step 2; and
- (4) estimate future O&M and military personnel requirements using the previously documented cost models and the O&M and MILPERS multiplier computed in step 3.

Three aspects of incorporating military personnel expenditures were examined within this review. First, the degree of correlation between observed FY88 O&M plus MILPERS and MEPRS expenses was reviewed. Secondly, the distribution of O&M and MILPERS multiplier values was evaluated to demonstrate that while correlation between O&M plus MILPERS and MEPRS expenses was high, the degree of variation in the ratio of these expenses within each Service branch is such that a single multiplier value is insufficient for resource allocation purposes. Lastly, the previously developed cost models, using budget-neutral parameters, were employed to provide FY88 estimates of O&M and military personnel requirements for comparison with observed values.

The analysis results are presented in four chapters. This chapter provides a brief introduction and executive summary; chapter 2.0 describes the correlation between FY88 expenses as reported through the Service financial data and FY88 MEPRS inpatient and ambulatory expenses. Chapter 3.0 discusses the distribution of O&M and MILPERS multiplier values and chapter 4.0 provides a comparison of observed and estimated expenses based on the previously developed cost models.

Note that all data presented in this report are current as of 20 November 1991, as provided to the Defense Medical Information System

(DMIS). Facilities for which insufficient data were available were excluded from this analysis.¹

1.1 EXECUTIVE SUMMARY

The results showed that there exists a high degree of correlation between FY88 observed O&M plus MILPERS expenses and FY88 observed MEPRS inpatient and ambulatory expenses. Exhibit 1-1 displays the correlation values for each Service branch and facility type. Since the interpretation of simple correlations may be limited when values have an extreme range greater than two or three orders of magnitude, the correlations were computed by facility type. Additionally, extreme values were removed and the correlations were recomputed to identify potential instability in the reported correlations. As displayed in the exhibit, the correlation factor for USAF overseas hospitals increased substantially when outlying facilities were removed. All other correlation factors appeared sufficiently stable after removing extreme values to be properly considered representative values of the correlation between observed O&M plus MILPERS expenses and MEPRS expenses.

While the correlation between these expenses was observed to be relatively high, examination of the distribution of the ratios showed that accepting a single ratio as a multiplier for all facilities within a Service branch would unnecessarily introduce greater than 40% error in estimates of many facility's expenses. Therefore, estimates of expenses were based on O&M and MILPERS multipliers computed for each facility. These multipliers, combined with budget-neutral estimates from the previously established cost models, resulted in relatively accurate estimates

¹These facilities included AH Berlin, 196th Station Hospital Shape, NH Keflavik, NMCL San Francisco, 24th Medical Group Howard, and the USAF Clinic Geilenkirchen.

EXHIBIT 1-1: CORRELATION MATRIX FOR OBSERVED FY88 O&M PLUS
MILPERS EXPENSES TO FY88 OBSERVED MEPRS EXPENSES

FACILITY TYPE	SERVICE BRANCH			
	ARMY	NAVY	USAF	USAF (No Outliers)
Medical Ctr	0.9904	0.8732	0.8241	0.8308
Conus Comm Hosp	0.9902	0.9967	0.9595	0.9595
Overseas Hosp	0.9780	0.9920	0.5714	0.9605
Clinic	---	0.9419	0.7268	0.7268

of FY88 expenses. Note, as more comprehensive models that encompass additional program elements and MEPRS functional categories (dental and/or special programs) are developed, it is expected that multiplier values will change substantially. Further, it is anticipated that variation in multiplier values across facilities will decline as more components are included and facility-level multipliers may not be necessary.

The first row of the table below displays the number of facilities that had greater than a 25% difference between estimated and observed O&M plus MILPERS expenses. The second row provides the number of facilities modeled within each Service branch and facility type category.

		<u>Medical Centers</u>	<u>CONUS Hospitals</u>	<u>Overseas Hospitals</u>	<u>Clinics</u>	<u>Total</u>
Army	>25% Error Modeled	0 7	3 29	2 11	0 2	5 49
Navy	>25% Error Modeled	0 4	6 21	1 8	1 12	8 45
USAF	>25% Error Modeled	0 <u>7</u>	4 <u>60</u>	3 <u>15</u>	11 <u>38</u>	18 <u>120</u>
DoD Total	>25% Error Modeled	0 18	13 110	6 34	12 52	31 214

Note, a 25% estimate error is only a practical measure for selecting outliers and is not meant to imply statistical significance. The table shows that 11 of 31 of the facilities with greater than 25% estimate error were USAF clinics. Therefore, only 19 of 162 hospitals considered had greater than 25% estimate error and 6 of these 19 hospitals were Navy CONUS Hospitals. A review of outlying facility's data may reveal data reporting problems or methodology enhancements that will reduce modeling error.

The analysis presented here was limited to FY88 data due to serious incompleteness in Service financial data for more recent years. It is anticipated that validation and an in-depth analysis of this approach will be performed using more current data as it becomes available. The approach outlined here will be built upon to also include elements of expenses in other PECs. Further, it is anticipated that the enhanced approach will be based upon MEPRS total facility expenses.

2.0 CORRELATION BETWEEN O&M PLUS MILPERS EXPENSES AND MEPRS EXPENSES

This chapter provides an examination of the relationship between observed FY88 operations and maintenance (O&M) plus military personnel (MILPERS) expenses and FY88 MEPRS total inpatient and ambulatory expenses (less occupational health and PRIMUS/NAVCARE expenses). The key point examined in this chapter is to what degree does a relationship between O&M plus MILPERS expenses and MEPRS total inpatient and ambulatory expenses exist at the facility level within each Service branch. Additionally, where a relationship is identified, the presence of outlier values is discussed. The correlations were examined both graphically and numerically for each Service branch.

Exhibit 2-1 is a scatter diagram of FY88 observed O&M plus MILPERS expenses on the Y-axis, versus FY88 observed total inpatient and ambulatory MEPRS expenses along the X-axis, for Army facilities. Two lines have been plotted on the scatter diagram - a 45 degree line passing through zero (dashed line) and a simple linear regression line (solid line).

Exhibit 2-2 provides Navy O&M plus MILPERS obligations plotted against MEPRS expenses. Like the Army, the Navy obligations and MEPRS expenses demonstrate a linear relationship. However, two outliers appear in the Navy data - Naval Hospital Bethesda and Naval Hospital Portsmouth, which both lie on the same point below the 45 degree line and are identified in the diagram.

A scatter plot for Air Force facilities is presented in exhibits 2-3 and 2-4.¹ Exhibit 2-3 shows all Air Force facilities in the data set. While the plotted points are approximately linear, there are three

¹Brooke AMC was reported in FY88 Air Force data as part of the San Antonio JMMC.

EXHIBIT 2-1: ARMY FY88 OBSERVED O&M PLUS MILPERS EXPENSES VERSUS
OBSERVED MEPRS EXPENSES

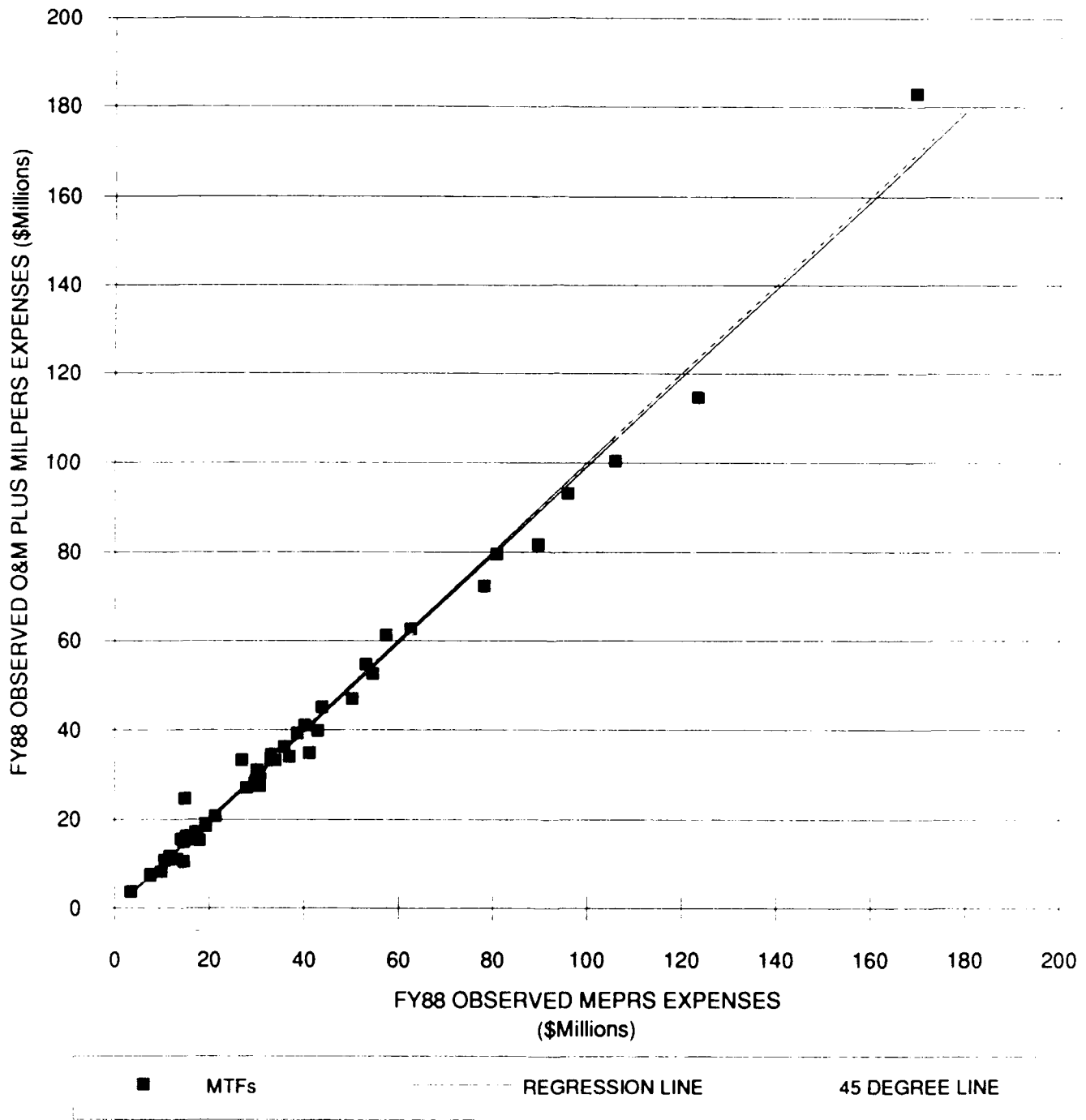
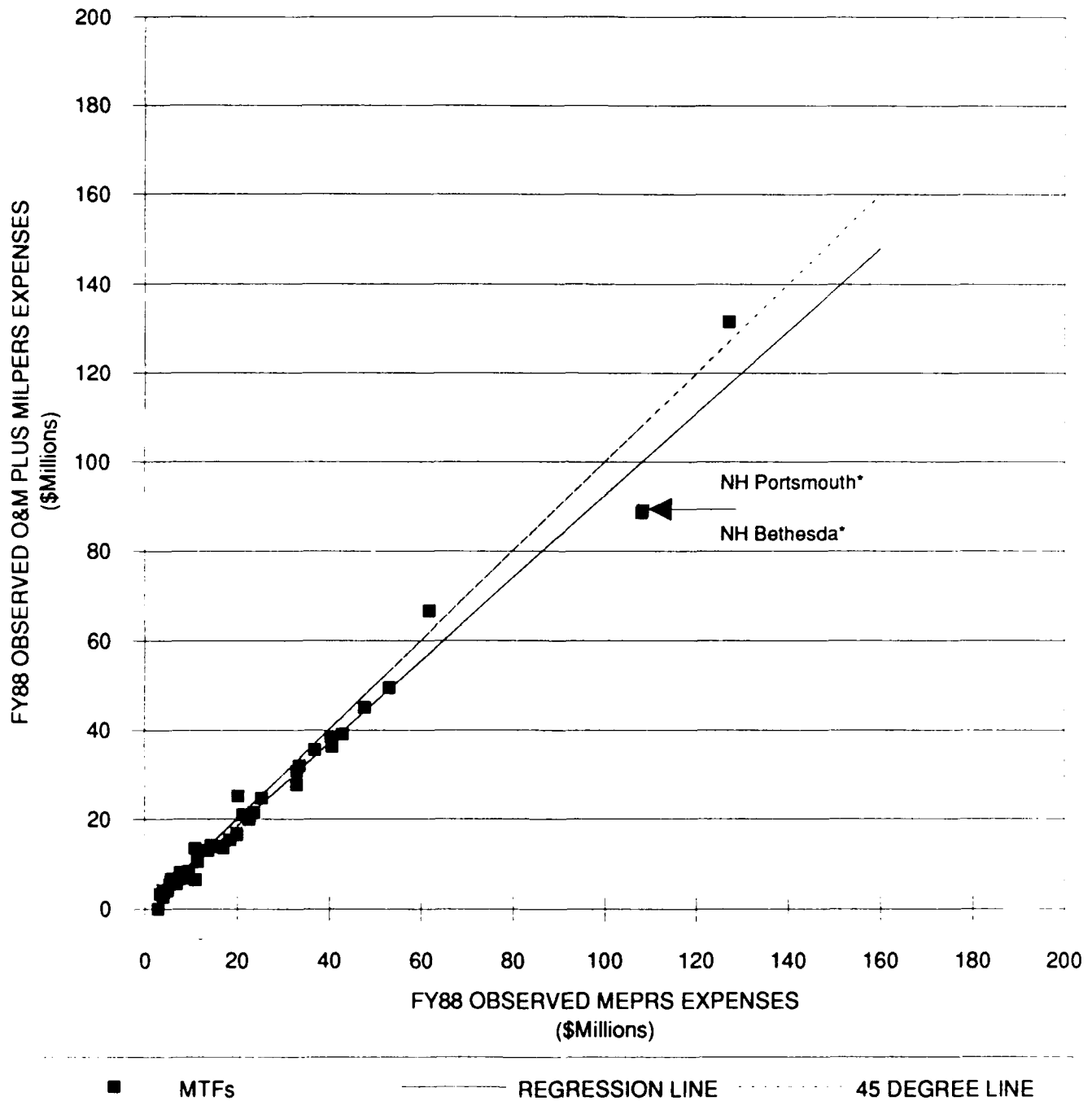


EXHIBIT 2-2: NAVY FY88 OBSERVED O&M PLUS MILPERS EXPENSES VERSUS
OBSERVED MEPRS EXPENSES



*NH Portsmouth and NH Bethesda data points overlap.

EXHIBIT 2-3: USAF FY88 OBSERVED O&M PLUS MILPERS EXPENSES VERSUS
OBSERVED MEPRS EXPENSES

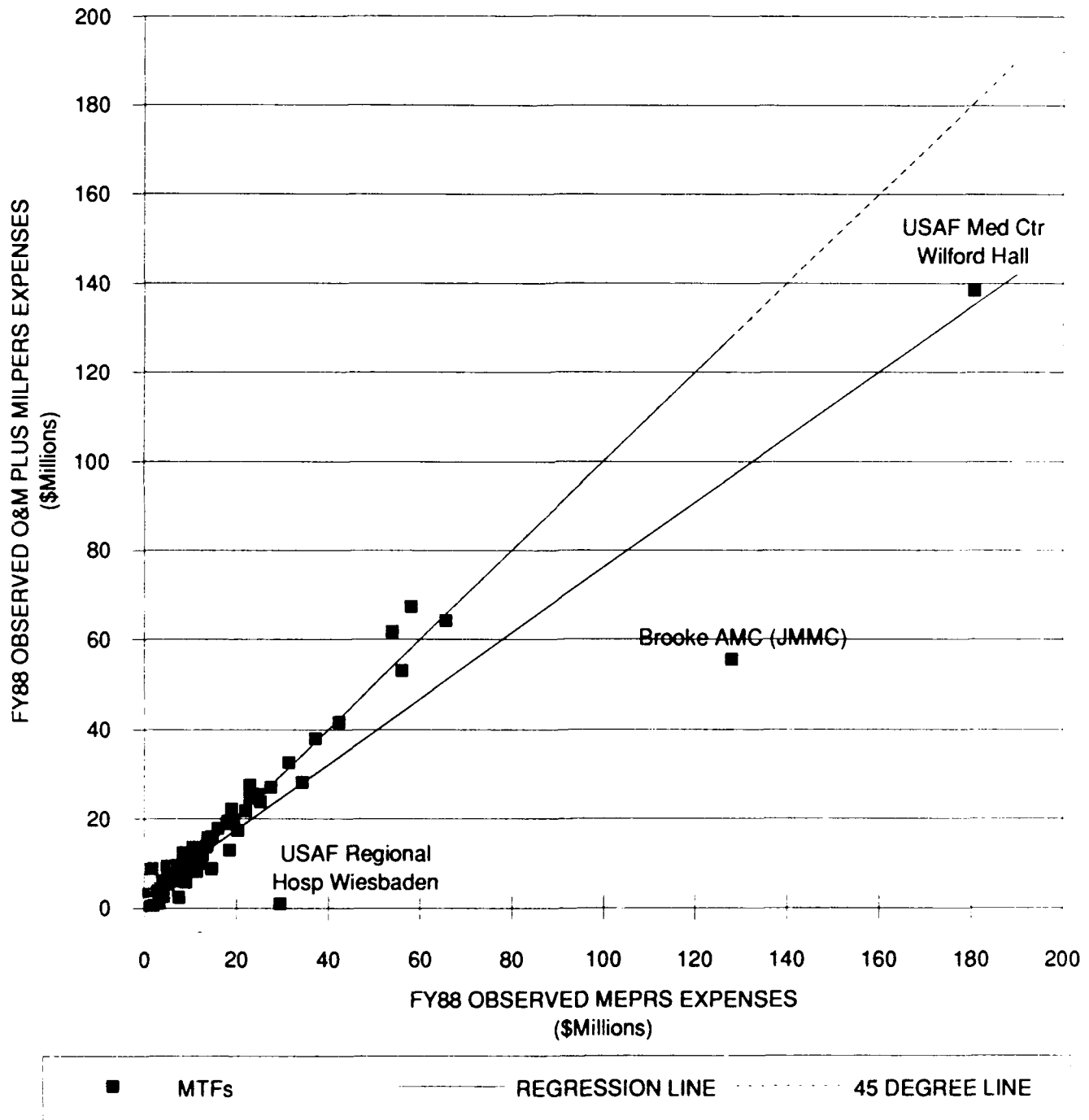
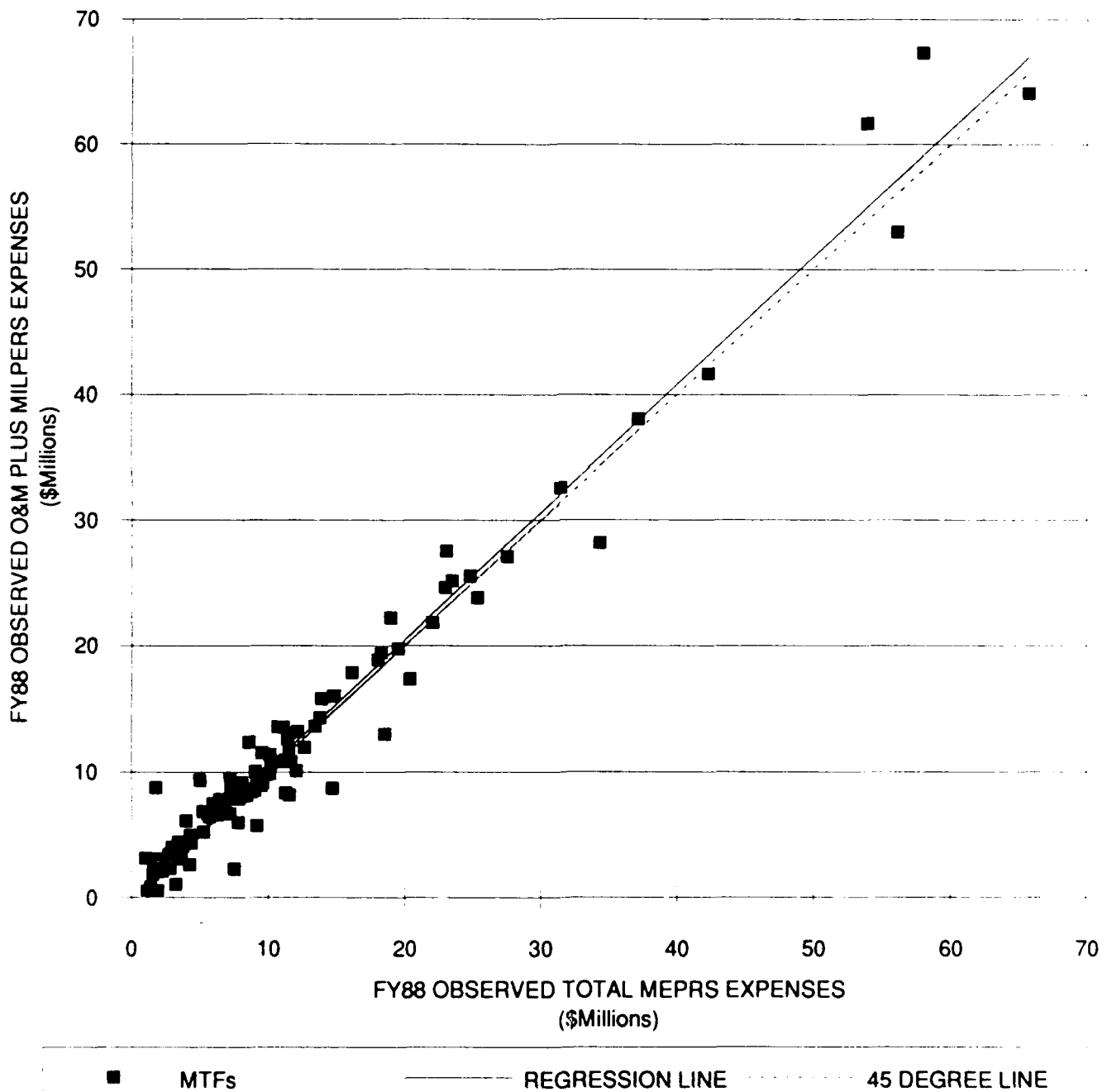


EXHIBIT 2-4: FY88 USAF OBSERVED O&M PLUS MILPERS EXPENSES VERSUS
OBSERVED MEPRS EXPENSES, NOT INCLUDING WIESBADEN, BROOKE, OR
WILFORD HALL



apparent outliers labeled in the exhibit: USAF Regional Medical Center Wiesbaden, Brooke AMC, and USAF Medical Center Wilford Hall. The regression line shown in exhibit 2-3 is considerably below the 45 degree line, and only loosely fits the plotted points. Exhibit 2-4, however, shows the same plot with these three outlying facilities removed from the data set and the scale reduced. Here the points demonstrate what appears to be a more linear relationship. Additionally, without the outliers, the regression line follows the 45 degree line much more closely.

The graphical presentations provided in exhibits 2-1 through 2-4 are substantiated numerically in exhibit 2-5. Exhibit 2-5 presents simple correlations between FY88 observed O&M plus MILPERS expenses and total MEPRS inpatient and ambulatory expenses. Since the value of simple correlations may be limited when values have an extreme range greater than two or three orders of magnitude, the correlations were computed by facility type. Additionally, extreme values were removed and the correlations were recomputed to identify potential instability in the reported correlations. As displayed in the exhibit, the correlation factor for USAF overseas hospitals increased substantially when USAF identified outliers were removed. All other correlation factors appeared sufficiently stable after removing extreme values. Thus, they may be properly considered representative values of the correlation between observed O&M plus MILPERS expenses and total MEPRS inpatient and ambulatory expenses for each Service branch and facility type.

**EXHIBIT 2-5: CORRELATION MATRIX FOR OBSERVED FY88 O&M PLUS
MILPERS EXPENSES TO FY88 OBSERVED MEPRS EXPENSES**

FACILITY TYPE	SERVICE BRANCH			
	ARMY	NAVY	USAF	USAF (No Outliers)
Medical Ctr	0.9904	0.8732	0.8241	0.8308
Conus Comm Hosp	0.9902	0.9967	0.9595	0.9595
Overseas Hosp	0.9780	0.9920	0.5714	0.9605
Clinic	---	0.9419	0.7268	0.7268

3.0 DISTRIBUTION OF THE O&M PLUS MILPERS MULTIPLIER

This chapter presents a summary reivew of the distribution of operations and maintenance (O&M) and military personnel (MILPERS) multipliers for each Service branch by examining the multiplier at the individual facility level. Recall the O&M and MILPERS multiplier is computed by taking the ratio of observed O&M plus MILPERS expenses to observed total MEPRS inpatient and ambulatory expenses (less occupational health and PRIMUS/NAVCARE). A base year multiplier computed in a similar fashion can serve as a factor for converting estimated MEPRS inpatient and ambulatory expenses into O&M plus MILPERS expenses for future year projections. The purpose of this review is to show that while there exists a high degree of correlation between O&M plus MILPERS expenses and MEPRS expenses, there is sufficient variation in the multiplier values such that it is best to compute a value for each facility and use that multiplier as a basis for future projections. Note, as more comprehensive models that encompass additional program elements and MEPRS functional categories (dental and/or special programs) are developed, it is expected that multiplier values will change substantially. Further, it is anticipated that variation in multiplier values across facilities will decline as more components are included and facility-level multipliers may not be necessary.

For each Service branch, two exhibits are presented. The first exhibit provides a histogram showing the frequency distribution of multiplier values, and the second exhibit displays each facility's multiplier value. The second exhibit also shows the Service branch average multiplier designated with an arrow.

Exhibits 3-1 and 3-2 present the Army histogram and multipliers for each facility, respectively. There were 49 facilities considered

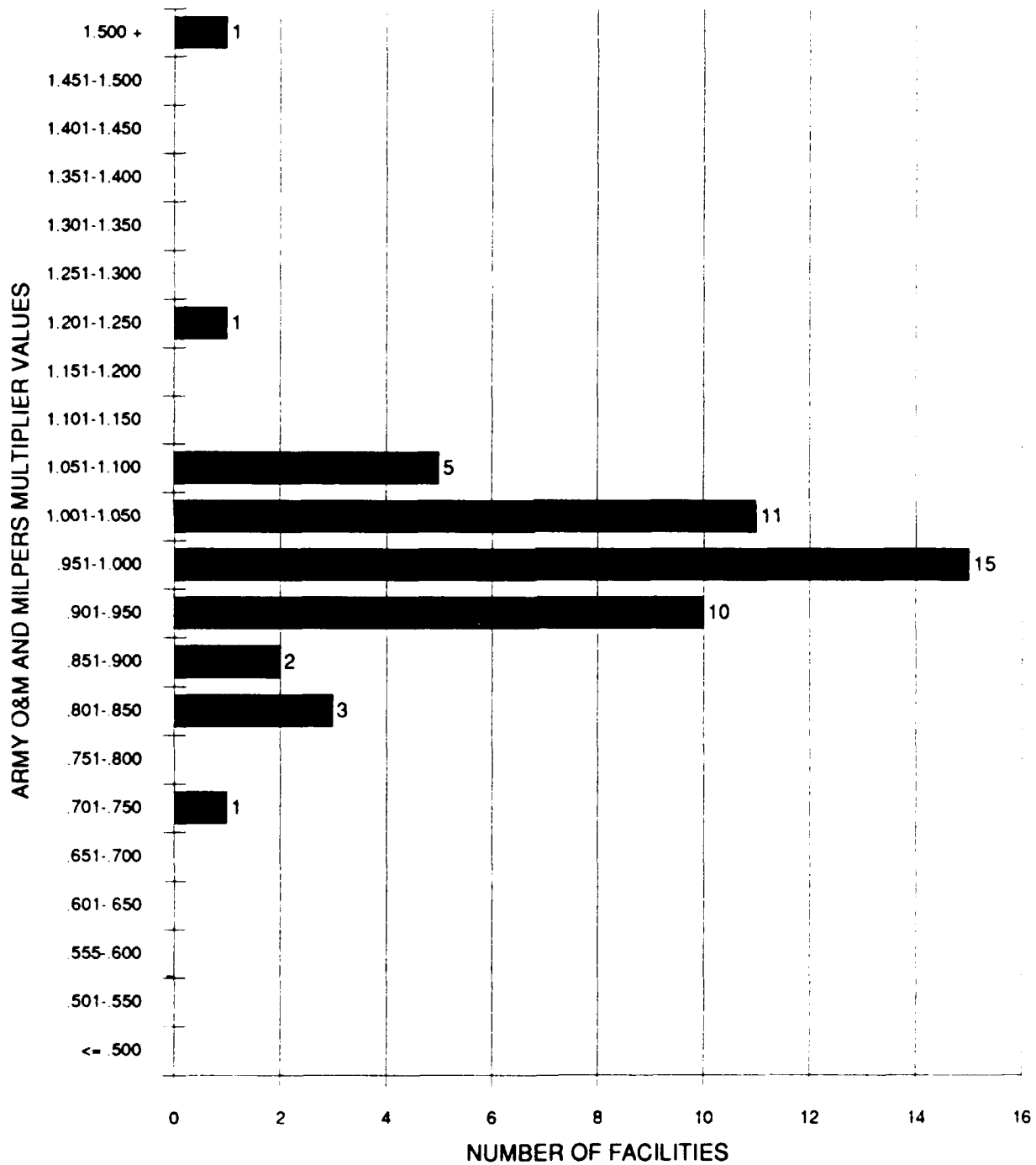
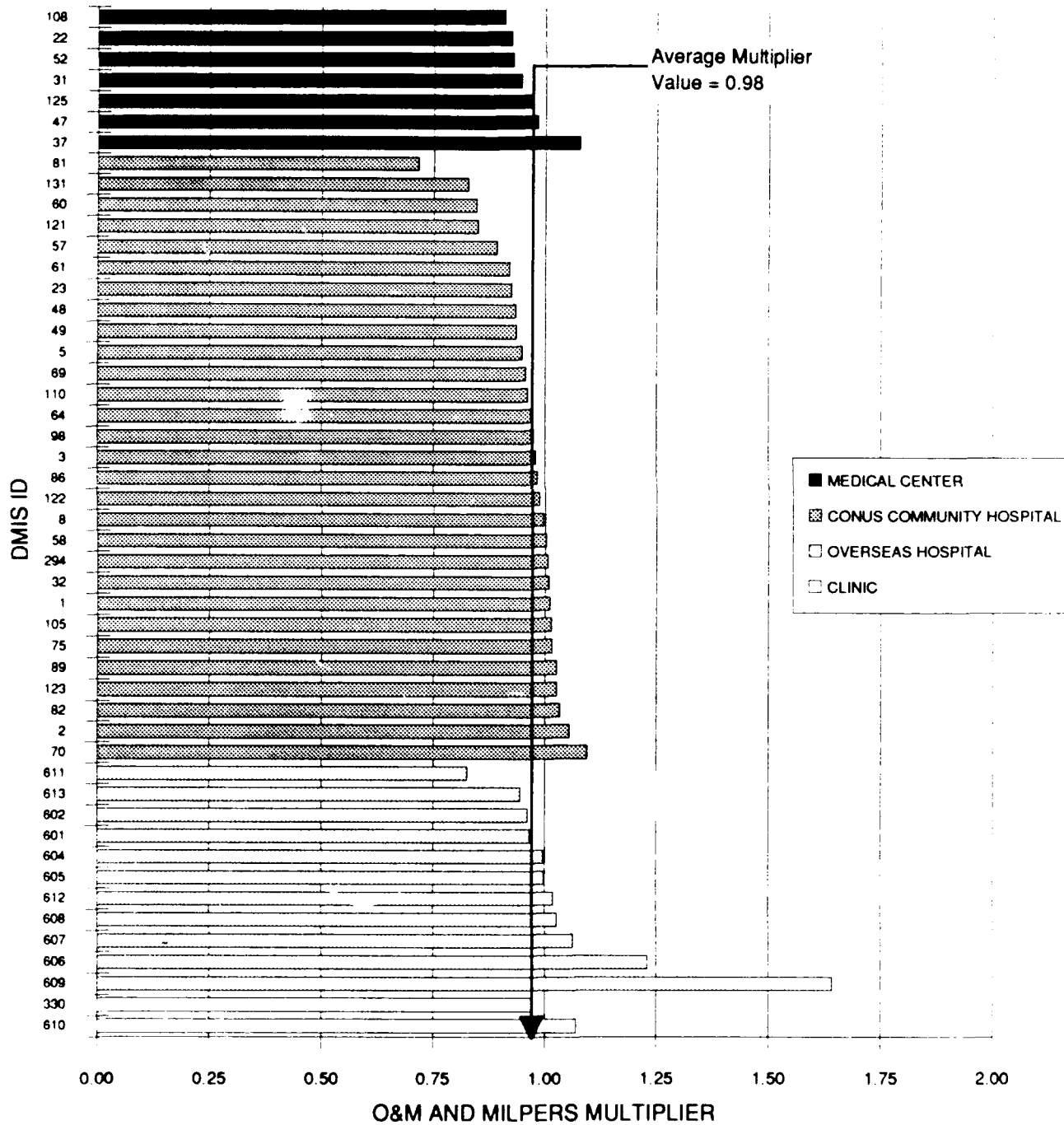
EXHIBIT 3-1: HISTOGRAM OF FY88 ARMY O&M AND MILPERS MULTIPLIER
VALUES

EXHIBIT 3-2: FY88 ARMY O&M AND MILPERS MULTIPLIER BY FACILITY TYPE



resulting in an average multiplier of 0.98. Exhibit 3-1 shows that the multiplier values for the Army were clustered between 0.801 and 1.100 and only three values were outside this range. This relatively close grouping of the multipliers is substantiated in exhibit 3-2. Exhibit 3-2 shows that most multipliers were close to the average value (represented by the arrow), with approximately half falling below and half lying above the average value. A few facilities, such as Patterson AH - Fort Monmouth (DMIS ID 81), 130th Station Hospital Heidelberg (DMIS ID 606), 67th Evacuation Hospital Wuerzburg (DMIS ID 609), and 45th Field Hospital Vicenza (DMIS ID 611) displayed large deviations from the average.

As with the Army, the multiplier values for the Navy fell within a relatively small range. Exhibits 3-3 and 3-4 provide a histogram of multiplier values and multipliers for each Navy facility, respectively. The Service branch average multiplier for the Navy was 0.92 with 45 facilities represented. As seen from exhibit 3-3, all but 5 values fell between 0.751 and 1.150. Thus, the Navy's multiplier were slightly more dispersed than Army multiplier values. This difference in dispersion is also apparent in exhibit 3-4. The Navy facility multiplier values showed a consistently larger range than for Army facilities. Clinics displayed a wider range of multiplier values relative to other facility types. Additionally, 35 of the Navy facility multipliers fell below the average while only 14 values were greater than the average multiplier value.

The Air Force multiplier distributions displayed marked differences from the Army and Navy distributions. Exhibits 3-5 and 3-6 show the histogram and facility multipliers for Air Force facilities. The average multiplier for the Air Force is 0.93 with 120 facilities represented. Referring to exhibit 3-5, 92 facilities were between 0.751 and 1.250 and

EXHIBIT 3-3: HISTOGRAM OF FY88 NAVY O&M AND MILPERS
MULTIPLIER VALUES

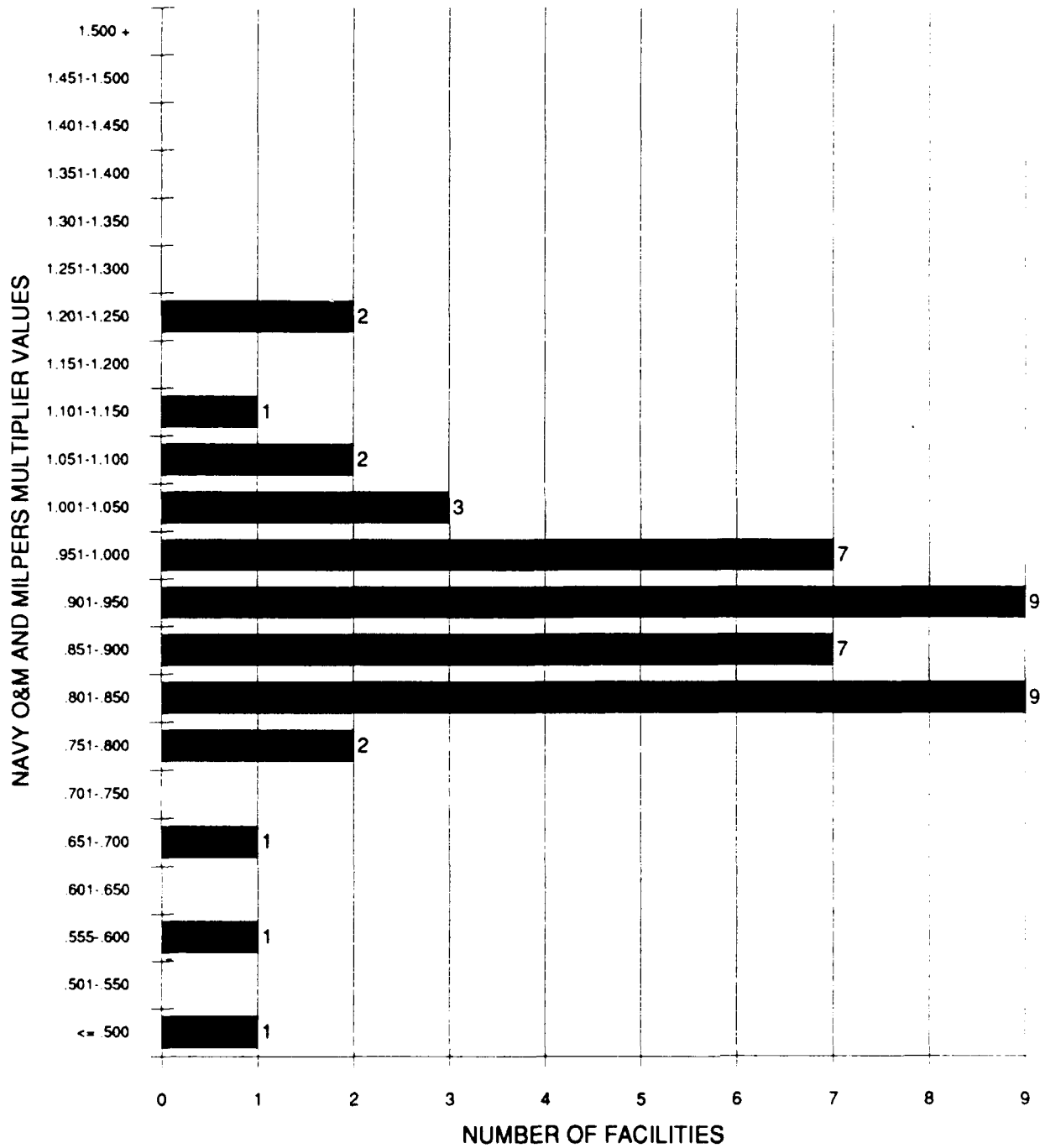


EXHIBIT 3-4: FY88 NAVY O&M AND MILPERS MULTIPLIER BY FACILITY TYPE

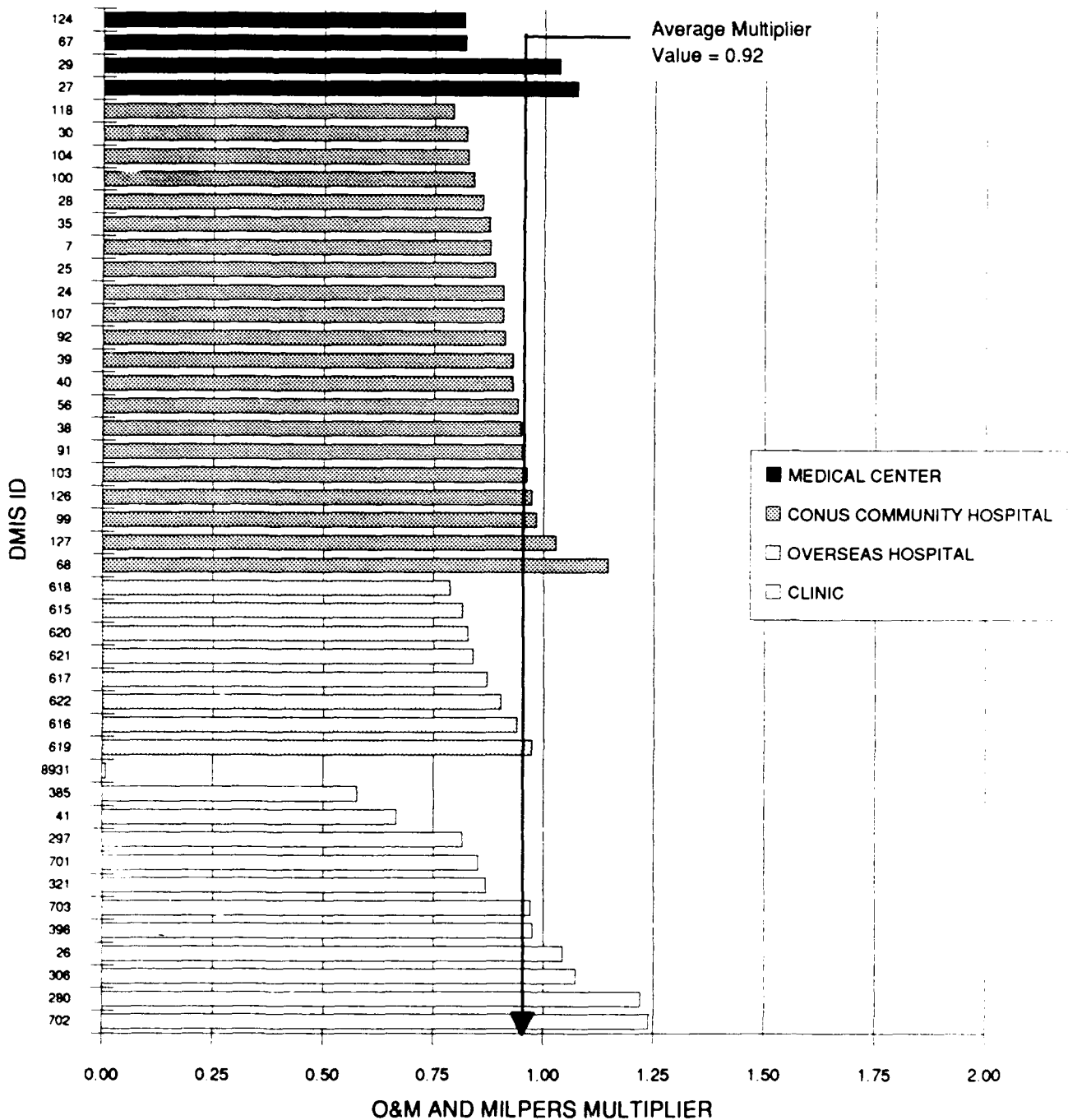


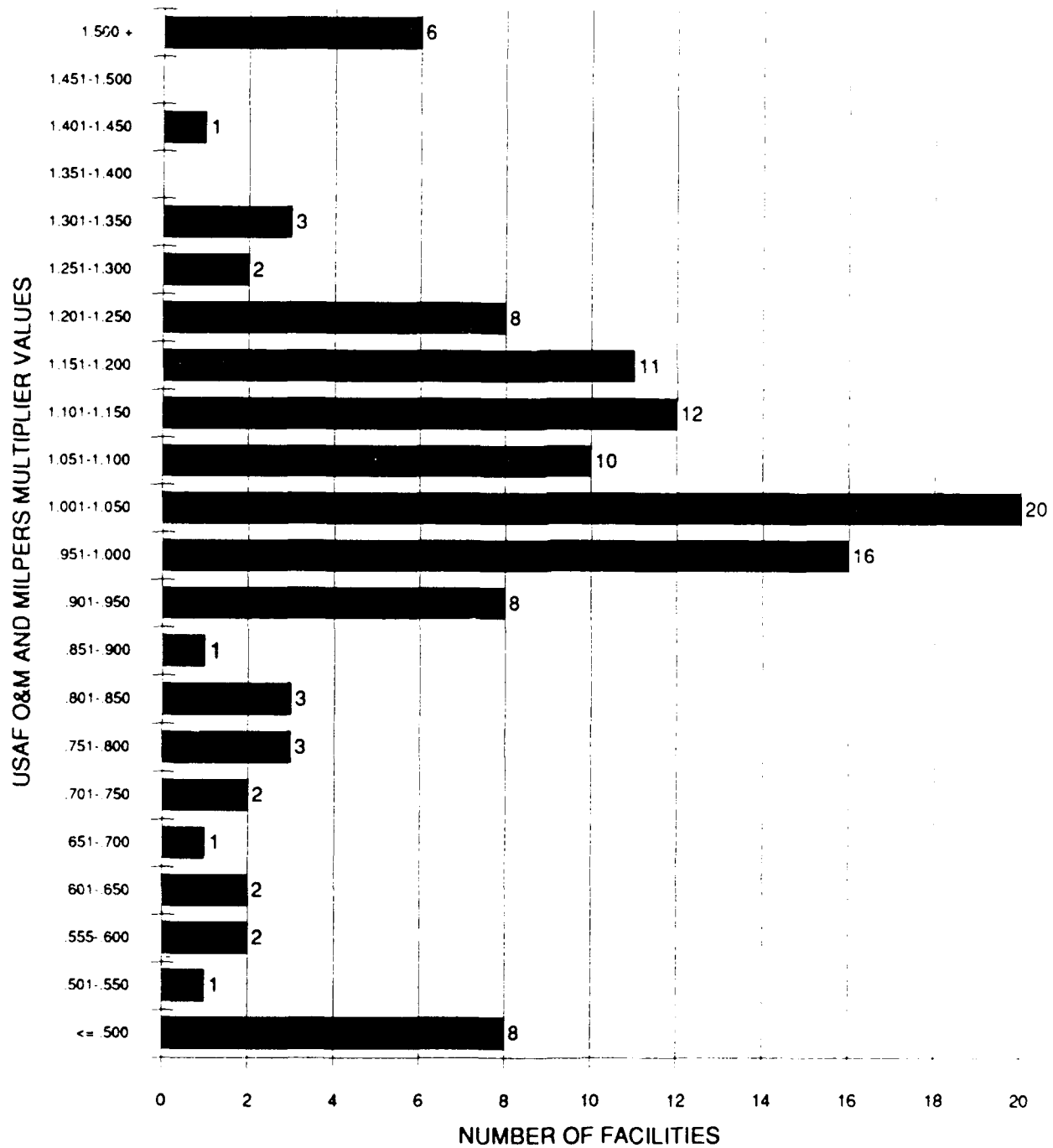
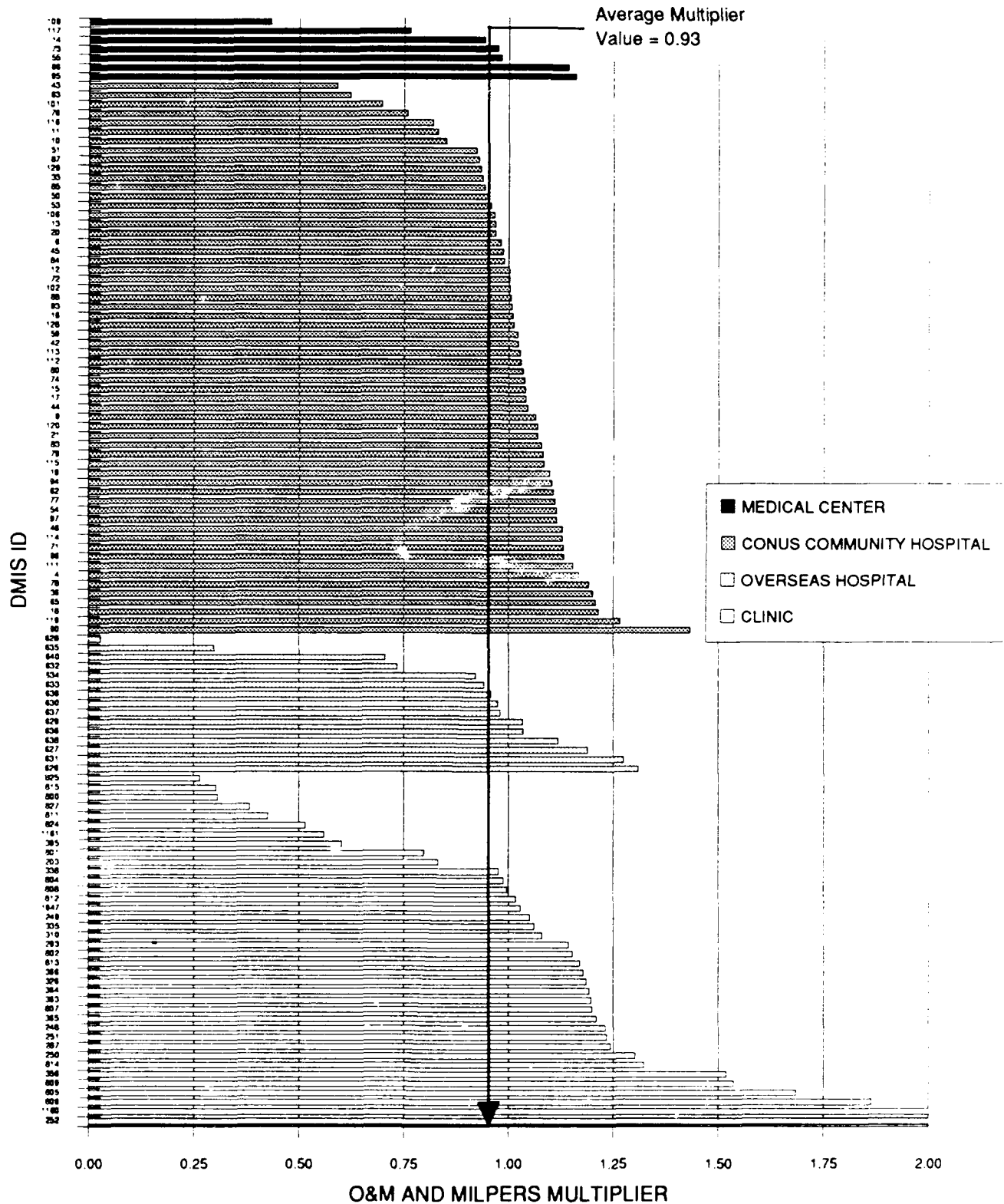
EXHIBIT 3-5: HISTOGRAM OF FY88 USAF O&M AND MILPERS
MULTIPLIER VALUES

EXHIBIT 3-6: FY88 USAF O&M AND MILPERS MULTIPLIER BY FACILITY TYPE



28 were outside this range. Therefore, the Air Force distribution of multiplier values was much more dispersed than either the Army or Navy distributions.

Exhibit 3-6 displays the multiplier values for each facility by type of facility. As can be seen, significant variations occurred within each facility type, also. Additionally, 95 multiplier values were above the average and 25 were below average. Three facilities, Brooke AMC (JMMC) (DMIS ID 109), USAF Regional Medical Center Wiesbaden (DMIS ID 628), and Wilford Hall Medical Center-Lackland (DMIS ID 117) had multiplier values substantially below average (0.03, 0.43, and 0.77, respectively) and accounted for over 12% of reviewed USAF O&M plus MILPERS expenses and more than 20% of reviewed total MEPRS inpatient and ambulatory expenses. Therefore these 3 facilities had a significant impact on the average multiplier. When these 3 facilities were removed from consideration the Air Force average multiplier value increased from 0.93 to 1.02.

While the correlation between O&M plus MILPERS expenses and MEPRS expenses is relatively high, this chapter has shown there exists some variation in multiplier values. Therefore, rather than accepting a single multiplier for each Service branch, multipliers were computed at the facility level. These multipliers were then used to estimate O&M plus MILPERS expenses. Chapter 4.0 compares FY88 observed and estimated O&M plus MILPERS expenses.

4.0 COMPARISON OF OBSERVED AND ESTIMATED O&M AND MILPERS EXPENSES

This chapter presents a comparison of FY88 observed and FY88 estimated operations and maintenance (O&M) and military personnel (MILPERS) expenses, within program element codes (PECs) 0807711 - Care in Regional Defense Facilities and 0807792 - Station Hospitals/Clinics, by Service branch for each MTF. Exhibits 4-1 through 4-3 present estimated and observed obligations for Army, Navy, and USAF facilities, respectively. The tables provide FY88 observed MEPRS inpatient and ambulatory (less occupational health and PRIMUS/NAVCARE) expenses, FY88 observed O&M and MILPERS expenses, the O&M and MILPERS multiplier, FY88 estimated O&M and MILPERS expenses, and the difference between estimated and observed expenses expressed in both absolute and relative terms.

The steps presented below were used to compute estimated expenses for FY88:

- (1) compute FY88 total expenses, including O&M and military personnel expenditures, for each facility as reported within the FY88 Service financial data;
- (2) compute total FY88 MEPRS inpatient clinician, inpatient non-clinician, and ambulatory expenses for each facility as reported in the MEPRS data;
- (3) compute an O&M and MILPERS multiplier for each facility by dividing total expenses as computed in step 1 by the MEPRS expenses computed in step 2;
- (4) estimate FY88 MEPRS inpatient and ambulatory expenses using the previously documented cost models; and lastly
- (5) compute estimated O&M and MILPERS expenses by multiplying the estimated MEPRS expenses (step 4) by the O&M and MILPERS multiplier (step 3).

Note that this methodology is quite similar to the O&M resource allocation methodology; and the only change is in the method for computing the multiplier and the resultant inclusion of military personnel expenditures within the resource allocation methodology. Thus, the resulting

EXHIBIT 4-1: FY88 ARMY ESTIMATED AND OBSERVED O&M AND MILPERS EXPENSES

DMIS ID	FACILITY	FACILITY TYPE	FY88 OBSERVED TOTAL MEPRS INPATIENT AND AMBULATORY EXPENSES*	FY88 OBSERVED O&M AND MILPERS EXPENSES (PECS 08077110807782)	FY88 O&M AND MILPERS MULTIPLE	FY88 ESTIMATED O&M AND MILPERS EXPENSES	ABSOLUTE DIFFERENCE (EST OBS)	RELATIVE DIFFERENCE (EST OBS/OBS)
330	WILCOX AMC FT DRUM	Clinic	\$7,538,177	\$7,323,000	0.97	\$7,597,888	\$274,888	3.8%
610	USAMC SA TAMI JAPAN	Clinic	\$3,479,701	\$3,729,000	1.07	\$3,315,115	(\$413,885)	-11.1%
1	FOX AH-REDSTONE ARSENAL	Conus Community Hospital	\$10,692,343	\$10,816,400	1.01	\$10,703,540	(\$112,860)	-1.0%
2	NOBLE A-H-FT MCCLELLAN	Conus Community Hospital	\$15,313,685	\$16,162,400	1.1	\$18,057,341	\$1,894,941	11.7%
3	LYSTER AH-FT RUCKER	Conus Community Hospital	\$19,243,401	\$18,969,400	0.96	\$16,443,523	(\$2,425,877)	-12.9%
5	BASSETT ACH-FT WAINWRIGHT	Conus Community Hospital	\$19,303,156	\$18,416,800	0.95	\$13,352,548	(\$5,064,352)	-27.5%
8	BUSS AH-FT HUACHUCA	Conus Community Hospital	\$17,102,319	\$17,049,200	1.00	\$15,662,408	(\$1,386,792)	-8.1%
23	HAYS AH-FT ORD	Conus Community Hospital	\$42,985,293	\$39,797,100	0.93	\$34,925,157	(\$4,871,943)	-12.2%
32	EVANS AH-FT CARSON	Conus Community Hospital	\$35,899,066	\$36,250,100	1.01	\$33,820,638	(\$2,429,462)	-6.7%
48	MARTIN AH-FT BENNING	Conus Community Hospital	\$50,185,632	\$46,919,700	0.93	\$50,024,069	\$3,104,369	6.6%
49	WINN AH-FT STEWART	Conus Community Hospital	\$30,801,431	\$28,856,200	0.94	\$24,190,048	(\$4,657,152)	-16.1%
57	IRWIN AH-FT RILEY	Conus Community Hospital	\$30,668,589	\$27,376,800	0.89	\$26,688,419	(\$678,481)	-2.5%
58	MUNSON AH-FT LEAVENWORTH	Conus Community Hospital	\$14,735,831	\$14,784,100	1.00	\$14,056,206	(\$3,051,072)	-4.9%
60	BLANCHFIELD ACH-FT CAMPBELL	Conus Community Hospital	\$41,158,881	\$34,877,000	0.85	\$37,928,072	\$3,051,072	8.7%
61	IRELAND AH-FT KNOX	Conus Community Hospital	\$37,016,688	\$34,086,300	0.92	\$38,541,816	\$4,455,516	13.1%
64	BAYNE-JONES AH-FT POLK	Conus Community Hospital	\$27,917,268	\$27,081,900	0.97	\$24,226,335	(\$2,855,565)	-10.5%
69	KIMBROUGH AH-FT MEADE	Conus Community Hospital	\$29,958,533	\$28,688,700	0.96	\$27,964,684	(\$724,016)	-2.5%
70	CUTLER AH-FT DEVENS	Conus Community Hospital	\$14,193,291	\$15,562,100	1.10	\$15,240,168	(\$321,932)	-2.1%
75	WOOD AH-FT LEONARD WOOD	Conus Community Hospital	\$38,668,168	\$39,315,900	1.02	\$35,806,921	(\$3,508,979)	-8.9%
81	PATTERSON AH-FT MONMOUTH	Conus Community Hospital	\$14,580,658	\$10,466,000	0.72	\$7,961,010	(\$3,504,990)	-23.9%
82	WALSON AH-FT DIX	Conus Community Hospital	\$33,281,636	\$34,450,100	1.04	\$30,597,523	(\$3,652,577)	-11.2%
86	KELLER AH-FT WEST POINT	Conus Community Hospital	\$15,681,071	\$15,440,500	0.98	\$15,966,116	\$525,616	3.4%
89	WOMACK AH-FT BRAGG	Conus Community Hospital	\$33,147,327	\$34,594,300	1.03	\$69,469,956	\$14,875,656	27.2%
98	REYNOLDS AH-FT SILL	Conus Community Hospital	\$34,065,693	\$33,248,100	0.98	\$35,055,425	\$1,807,325	5.4%
105	MONCRIEF AH-FT JACKSON	Conus Community Hospital	\$32,998,267	\$33,530,200	1.02	\$33,986,503	\$456,303	1.4%
110	DARNALL AH-FT HOOD	Conus Community Hospital	\$54,534,687	\$52,516,500	0.96	\$52,919,853	\$403,453	0.8%
121	MC DONALD AH-FT EUSTIS	Conus Community Hospital	\$18,042,169	\$15,350,100	0.85	\$17,133,087	\$1,782,987	11.6%
122	KENNER AH-FT LEE	Conus Community Hospital	\$17,319,830	\$17,126,500	0.99	\$18,361,073	\$1,234,573	7.2%
123	DEWITT AH-FT BELVOIR	Conus Community Hospital	\$30,201,106	\$31,028,300	1.03	\$31,925,491	\$897,191	2.9%
131	WEED ACH-FT IRWIN	Conus Community Hospital	\$9,848,517	\$8,152,400	0.83	\$6,089,993	(\$2,062,407)	-25.3%
294	HAWLEY AH-FT B HARRISON	Conus Community Hospital	\$7,609,235	\$7,867,600	1.01	\$7,592,146	(\$75,454)	-1.0%
22	LETTERMAN AMC-PRESIDIO OF SF	Medical Center	\$78,105,499	\$72,286,600	0.93	\$71,754,366	(\$552,434)	-0.7%
31	FITZSIMONS AMC-DENVER	Medical Center	\$105,911,413	\$100,351,900	0.95	\$91,662,140	(\$8,688,760)	-8.7%
37	WALTER REED AMC-WASHINGTON	Medical Center	\$169,495,672	\$182,855,500	1.08	\$174,009,880	(\$8,845,620)	-4.8%
52	EISENHOWER AMC-FT GORDON	Medical Center	\$80,758,467	\$79,504,800	0.98	\$79,768,509	\$263,709	0.3%
58	TRIPLER AMC-FT SHAFTER	Medical Center	\$123,474,521	\$114,640,600	0.93	\$104,189,141	(\$10,451,459)	-9.1%
108	WILLIAM BEAUMONT AMC FT BLISS	Medical Center	\$89,589,710	\$81,558,600	0.91	\$89,260,599	\$7,701,999	9.4%
125	MADGAN AMC-FT LEWIS	Medical Center	\$85,925,290	\$93,044,700	0.97	\$109,987,192	\$16,942,492	18.2%
601	34th GENERAL HOSP-AUGSBURG	Overseas Hospital	\$21,304,054	\$20,598,000	0.97	\$18,488,232	(\$2,108,768)	-10.2%
602	2nd FIELD HOSP-BREMERSHAVEN	Overseas Hospital	\$30,825,297	\$29,665,000	0.96	\$29,480,725	(\$184,275)	-0.6%
605	97th GENERAL HOSP-FRANKFURT	Overseas Hospital	\$11,762,254	\$11,732,000	1.00	\$11,521,382	(\$210,618)	-1.8%
606	130th STATN HOSP-HEIDELBERG	Overseas Hospital	\$62,568,542	\$62,541,000	1.00	\$59,602,057	(\$2,938,943)	-4.7%
607	2nd GENERAL HOSP-LANDSTUHL	Overseas Hospital	\$26,960,685	\$33,202,000	1.23	\$34,453,523	\$1,251,523	3.8%
608	88th GENERAL HOSP-NURNBERG	Overseas Hospital	\$7,449,077	\$61,151,000	1.08	\$55,638,521	(\$5,512,479)	-9.0%
609	97th GENERAL HOSP-WURZBURG	Overseas Hospital	\$43,835,045	\$45,083,000	1.03	\$39,972,637	(\$5,110,363)	-11.3%
611	49th FIELD HOSP-VICENZA	Overseas Hospital	\$14,969,548	\$24,583,000	1.64	\$41,109,384	\$16,526,384	67.2%
612	121st EVACUATION HOSP-SEOUL	Overseas Hospital	\$13,236,298	\$10,841,000	0.83	\$6,890,303	(\$4,041,697)	-36.9%
813	GORGAS ACH	Overseas Hospital	\$40,169,615	\$40,986,000	1.02	\$38,098,509	(\$2,897,491)	-7.1%
			\$29,696,790	\$28,105,500	0.95	\$29,069,931	\$664,431	3.4%
	ALL ARMY FACILITIES		\$1,904,339,466	\$1,872,373,300	0.98	\$1,860,588,203	(\$11,785,097)	-0.6%

*Total MEPRS inpatient and ambulatory expenses exclude occupational health (BHG) and PRIMUS/NAVCARE (BHH) expenses.

EXHIBIT 4-2: FY88 NAVY ESTIMATED AND OBSERVED O&M AND MILPERS EXPENSES

DMIS ID	FACILITY	FACILITY TYPE	FY88 OBSERVED TOTAL MEPRS INPATIENT AND AMBULATORY EXPENSES*	FY88 OBSERVED O&M AND MILPERS EXPENSES (PCS 08077110807782)	FY88 O&M MILPERS MULTIPLIER	FY88 ESTIMATED O&M AND MILPERS EXPENSES	ABSOLUTE DIFFERENCE (EST OBS)	RELATIVE DIFFERENCE (EST OBS)
26	NAACL PORT HUENEME	Clinic	\$3,956,813	\$4,132,134	1.04	\$4,874,300	\$742,166	18.0%
41	NAACL KEY WEST	Clinic	\$3,955,079	\$2,630,417	0.67	\$2,134,069	(\$505,348)	-19.1%
280	NAACL PEARL HARBOR	Clinic	\$10,935,579	\$13,350,523	1.22	\$16,259,848	\$2,909,325	21.8%
297	NAACL NEW ORLEANS	Clinic	\$4,957,219	\$4,049,923	0.82	\$3,003,183	(\$1,046,740)	-25.8%
306	NAACL ANNAPOLIS	Clinic	\$5,663,227	\$6,080,447	1.07	\$5,256,100	(\$824,347)	-13.6%
321	NAACL PORTSMOUTH	Clinic	\$4,701,715	\$4,080,593	0.87	\$3,107,887	(\$982,706)	-24.0%
385	NAACL QUANTICO	Clinic	\$1,110,886	\$6,414,845	0.58	\$7,611,372	\$1,196,527	18.7%
388	NAACL SEATTLE	Clinic	\$3,308,332	\$3,231,277	0.98	\$2,606,677	(\$624,600)	-19.3%
701	NAACL SAN DIEGO	Clinic	\$19,770,211	\$16,847,155	0.85	\$20,988,370	\$4,142,215	24.6%
702	NAACL NORFOLK	Clinic	\$20,258,294	\$25,126,426	1.24	\$22,999,021	(\$2,127,405)	-8.9%
703	NAACL WASHINGTON DC	Clinic	\$5,470,050	\$5,316,799	0.97	\$4,552,936	(\$763,863)	-14.4%
8031	NAACL LONDON	Clinic	\$2,894,238	\$28,244	0.01	\$28,874	\$630	2.2%
7	BRH NAVSTA ADAK	Corus Community Hospital	\$4,169,325	\$3,663,356	0.88	\$4,237,454	\$572,098	15.6%
24	NR CAMP PENDLETON	Corus Community Hospital	\$4,046,485	\$39,092,670	0.91	\$38,496,916	(\$595,754)	-1.5%
25	NH LONG BEACH	Corus Community Hospital	\$40,773,748	\$36,290,151	0.89	\$24,941,427	(\$11,348,724)	-31.3%
28	NH LEMOORE	Corus Community Hospital	\$9,586,617	\$8,235,724	0.86	\$1,118,123	\$1,862,399	22.6%
30	BRH MCGA/C/C TWENTY NINE PALMS	Corus Community Hospital	\$6,663,907	\$5,495,471	0.82	\$8,905,376	\$3,409,905	62.0%
35	NH GROTON	Corus Community Hospital	\$22,843,457	\$19,869,090	0.88	\$15,160,433	(\$4,708,587)	-23.7%
38	NH PENSACOLA	Corus Community Hospital	\$40,561,117	\$38,483,688	0.95	\$35,794,735	(\$2,688,953)	-7.0%
39	NH JACKSONVILLE	Corus Community Hospital	\$53,177,833	\$49,440,642	0.93	\$47,971,497	(\$1,468,145)	-3.0%
40	NH ORLANDO	Corus Community Hospital	\$33,031,141	\$30,723,623	0.93	\$31,936,305	\$1,212,682	3.9%
56	NH GREAT LAKES	Corus Community Hospital	\$17,803,088	\$45,024,193	0.94	\$48,528,842	\$3,504,649	7.8%
68	NH PATUXENT RIVER	Corus Community Hospital	\$5,790,371	\$6,646,291	1.15	\$9,214,668	\$2,568,377	38.6%
91	NH CAMP LEJEUNE	Corus Community Hospital	\$33,528,225	\$31,915,195	0.95	\$35,168,095	\$3,252,900	10.2%
92	NH CHERRY POINT	Corus Community Hospital	\$11,474,362	\$10,468,548	0.91	\$14,388,975	\$3,920,427	37.4%
99	NH PHILADELPHIA	Corus Community Hospital	\$21,259,783	\$20,843,390	0.99	\$17,073,346	(\$3,870,044)	-18.5%
100	NH NEWPORT	Corus Community Hospital	\$19,950,025	\$16,765,824	0.84	\$12,267,492	(\$4,498,332)	-26.8%
103	NH CHARLESTON	Corus Community Hospital	\$36,964,633	\$35,590,009	0.96	\$40,789,604	\$5,199,595	14.6%
104	NH BEAUFORT	Corus Community Hospital	\$20,009,234	\$16,564,207	0.83	\$19,035,415	\$2,471,208	14.9%
107	NH MILLINGTON	Corus Community Hospital	\$22,852,505	\$20,769,381	0.91	\$18,452,410	(\$2,316,971)	-11.2%
118	NH CORPUS CHRISTI	Corus Community Hospital	\$17,061,208	\$13,555,715	0.79	\$11,210,350	(\$2,345,365)	-17.3%
126	NH BREMERTON	Corus Community Hospital	\$25,371,266	\$24,727,984	0.97	\$25,409,099	\$681,115	2.8%
127	NH OAK HARBOR	Corus Community Hospital	\$7,791,807	\$8,016,697	1.03	\$10,920,398	\$2,903,701	36.2%
27	NH OAKLAND	Medical Center	\$6,190,905	\$68,547,078	1.08	\$72,391,587	\$5,844,509	8.8%
29	NH SAN DIEGO	Medical Center	\$127,076,572	\$131,630,057	1.04	\$125,125,418	(\$6,504,639)	-4.9%
67	NH BETHESDA	Medical Center	\$108,348,603	\$89,082,423	0.82	\$84,572,840	(\$4,519,583)	-5.1%
124	NH PORTSMOUTH	Medical Center	\$108,113,742	\$88,576,017	0.82	\$95,296,121	\$6,720,104	7.6%
615	NH GUANTANAMO BAY	Overseas Hospital	\$7,028,061	\$5,737,716	0.82	\$6,654,603	\$916,887	16.0%
616	NH ROOSEVELT ROADS CEIBA	Overseas Hospital	\$13,754,096	\$12,937,210	0.94	\$10,793,057	(\$2,144,153)	-16.6%
617	NH NAPLES	Overseas Hospital	\$15,915,843	\$13,887,822	0.87	\$11,582,383	(\$2,305,439)	-16.6%
618	NH ROTTA	Overseas Hospital	\$6,502,373	\$6,705,890	0.79	\$8,029,158	\$1,323,268	19.7%
619	NH SUBIC BAY	Overseas Hospital	\$14,450,179	\$14,076,218	0.97	\$21,130,187	\$7,053,969	50.1%
620	NH GUAM AGANA	Overseas Hospital	\$18,529,787	\$15,362,509	0.83	\$15,918,130	(\$555,621)	-3.6%
621	NH OKINAWA	Overseas Hospital	\$32,982,106	\$27,721,908	0.84	\$24,338,539	(\$3,383,369)	-12.2%
622	NH YOKOSUKA	Overseas Hospital	\$23,682,802	\$21,408,606	0.90	\$20,119,435	(\$1,298,171)	-6.0%
ALL NAVY FACILITIES			\$1,160,777,859	\$1,067,295,016	0.92	\$1,069,396,055	\$2,101,039	0.2%

*Total MEPRS inpatient and ambulatory expenses exclude occupational health (BHG) and PRIMUS/NAVACARE (BHH) expenses.

EXHIBIT 4-3: FY88 AIR FORCE ESTIMATED AND OBSERVED O&M AND MILPERS EXPENSES

DMIS ID	FACILITY	FACILITY TYPE	FY88 OBSERVED TOTAL MEPRS INPATIENT AND AMBULATORY EXPENSES*	FY88 OBSERVED O&M AND MILPERS EXPENSES (PECS 08077110807782)	FY88 O&M AND MILPERS MULTIPLIER	FY88 ESTIMATED O&M AND MILPERS EXPENSES	ABSOLUTE DIFFERENCE (EST OBS)	RELATIVE DIFFERENCE (EST OBS/OBS)
203	USAF CLINIC EELSON	Clinic	\$3,650,432	\$3,050,417	0.83	\$2,559,640	(\$490,777)	16.1%
248	USAF CLINIC LOS ANGELES	Clinic	\$1,947,436	\$2,400,473	1.23	\$2,527,606	\$127,133	5.3%
249	USAF CLINIC NORTON	Clinic	\$6,522,551	\$6,860,502	1.05	\$4,333,596	(\$2,526,906)	-36.8%
250	USAF CLINIC MCCLELLAN	Clinic	\$3,233,767	\$6,819,586	1.30	\$4,842,574	(\$1,977,012)	-29.0%
251	USAF CLINIC LOWRY	Clinic	\$2,748,439	\$3,392,223	1.23	\$3,302,320	(\$89,903)	-2.7%
252	USAF CLINIC PETERSON	Clinic	\$1,764,517	\$8,739,543	4.95	\$21,127,623	\$12,388,080	141.7%
287	13th MED GRP-HICKAM	Clinic	\$5,982,590	\$7,444,819	1.24	\$5,303,699	(\$2,141,120)	-28.8%
293	305th STRAT HOSP-GRISSOM	Clinic	\$4,307,680	\$4,901,025	1.14	\$3,335,797	(\$1,595,228)	-32.4%
310	USAF CLINIC HANSCOM	Clinic	\$3,745,300	\$4,046,663	1.08	\$2,616,005	(\$1,430,658)	-31.1%
326	USAF CLINIC MCGLUIRE	Clinic	\$2,898,105	\$3,439,227	1.19	\$3,028,572	(\$410,655)	-11.7%
335	USAF CLINIC POPE	Clinic	\$3,495,844	\$3,714,329	1.06	\$3,000,068	(\$714,261)	-19.2%
338	USAF CLINIC VANCE	Clinic	\$2,340,065	\$2,289,355	0.98	\$1,870,920	(\$418,435)	-18.3%
356	USAF CLINIC CHARLESTON	Clinic	\$3,986,482	\$6,059,386	1.52	\$5,407,309	(\$652,077)	-10.8%
363	USAF CLINIC BROOKS	Clinic	\$1,951,541	\$2,339,223	1.20	\$2,267,336	(\$71,887)	-3.1%
364	USAF CLINIC GOODFELLOW	Clinic	\$3,175,399	\$3,791,066	1.19	\$3,207,503	(\$583,563)	-15.4%
365	USAF CLINIC KELLY	Clinic	\$3,391,103	\$4,106,707	1.21	\$3,268,357	(\$838,350)	-20.4%
366	USAF CLINIC RANDOLPH	Clinic	\$5,594,061	\$6,599,560	1.18	\$4,918,408	(\$1,681,152)	-25.5%
395	USAF CLINIC MCCHORD	Clinic	\$4,263,174	\$2,573,919	0.60	\$1,269,803	(\$1,304,116)	-50.7%
800	USAF CLINIC RHEIN MAIN	Clinic	\$3,263,182	\$1,005,308	0.31	\$923,391	(\$81,917)	-8.1%
801	USAF CLINIC SEMBACH	Clinic	\$2,835,534	\$2,285,390	0.80	\$2,110,251	(\$155,139)	-6.8%
802	43rd STRAT CLINIC-ANDERSON	Clinic	\$3,734,026	\$4,310,187	1.15	\$4,234,879	(\$75,308)	-1.7%
804	313th MED GRP-KADENA AB	Clinic	\$5,255,746	\$5,202,800	0.99	\$5,002,467	(\$200,333)	-3.9%
805	USAF CLINIC SPANGDAHEM	Clinic	\$1,797,149	\$3,029,154	1.69	\$4,485,069	\$1,455,915	48.1%
806	USAF CLINIC RAMSTEIN	Clinic	\$4,988,472	\$9,300,598	1.86	\$9,366,873	\$66,275	0.7%
807	USAF CLINIC ZWEIBRUCKEN	Clinic	\$3,132,178	\$3,759,479	1.20	\$3,372,948	(\$386,531)	-10.3%
808	USAF CLINIC AVIANO	Clinic	\$2,398,607	\$2,393,310	1.00	\$2,132,698	(\$260,612)	-10.9%
809	USAF CLINIC SALT VITO	Clinic	\$1,602,180	\$2,483,436	1.54	\$2,630,051	\$166,615	6.8%
811	USAF CLINIC ZARAGOZA	Clinic	\$1,205,901	\$515,570	0.43	\$700,471	\$184,901	35.9%
812	USAF CLINIC BENTWATERS	Clinic	\$3,661,853	\$3,733,301	1.02	\$3,144,301	(\$589,000)	-15.8%
813	USAF CLINIC CHICKSANDS	Clinic	\$1,556,311	\$1,822,316	1.17	\$1,992,885	\$170,569	9.4%
814	USAF CLINIC ALCONBURY RAF UPWOOD	Clinic	\$2,997,371	\$3,969,729	1.32	\$3,522,513	(\$447,216)	-11.3%
815	USAF CLINIC FAIRFORD	Clinic	\$1,490,377	\$454,613	0.30	\$490,190	\$33,577	7.8%
824	USAF CLINIC ANKARA	Clinic	\$1,425,168	\$736,472	0.52	\$741,728	\$5,256	0.7%
825	USAF CLINIC IZMIR	Clinic	\$1,932,912	\$512,613	0.27	\$399,794	(\$112,819)	-22.0%
827	USAF CLINIC CAMP NEW AMSTERDAM	Clinic	\$1,394,638	\$536,273	0.38	\$647,870	\$111,597	20.8%
1160	USAF CLINIC COMISO	Clinic	\$1,053,320	\$3,063,793	2.91	\$4,694,399	\$1,630,606	53.2%
1161	USAF CLINIC FLORENES	Clinic	\$1,419,695	\$796,956	0.56	\$792,005	(\$4,951)	-0.6%
1947	USAF CLINIC GREENHAM COMMON	Clinic	\$1,952,020	\$2,009,435	1.03	\$1,894,322	(\$115,113)	-5.7%
4	AIR UNIVERSITY RGN HOSP-MAXWELL	Conus Community Hospital	\$18,968,993	\$22,182,206	1.17	\$21,526,375	(\$655,831)	-3.0%
6	USAF HOSP ELMENDORF	Conus Community Hospital	\$27,535,617	\$27,064,238	0.98	\$23,025,574	(\$4,038,664)	-14.9%
9	832nd MED GRP-LUKE	Conus Community Hospital	\$18,277,242	\$19,467,716	1.07	\$20,462,583	\$994,867	5.1%
10	836th MED GRP DAVIS MONTHAN	Conus Community Hospital	\$20,352,947	\$17,350,367	0.85	\$15,123,038	(\$2,227,329)	-12.8%
11	USAF HOSP WILLIAMS	Conus Community Hospital	\$12,085,785	\$10,057,177	0.83	\$7,463,547	(\$2,593,630)	-25.8%
12	97th STRAT HOSP-EAKER	Conus Community Hospital	\$7,835,519	\$7,852,844	1.00	\$7,912,969	\$60,125	0.8%
13	USAF HOSP LITTLE ROCK	Conus Community Hospital	\$11,098,924	\$10,759,138	0.97	\$10,721,436	(\$37,702)	-0.4%

... Continued ...

*Total MEPRS inpatient and ambulatory expenses exclude occupational health (BHG) and PRIMUS/NAVCARE (BHH) expenses.

EXHIBIT 4-3: FY88 AIR FORCE ESTIMATED AND OBSERVED O&M AND MILPERS EXPENSES
(CONTINUED)

DMIS ID	FACILITY	FACILITY TYPE	FY88 OBSERVED TOTAL MEPRS INPATIENT AND AMBULATORY EXPENSES*	FY88 OBSERVED O&M AND MILPERS EXPENSES (PECS 08077110807782)	FY88 O&M AND MILPERS MULTIPLIER	FY88 ESTIMATED O&M AND MILPERS EXPENSES	ABSOLUTE DIFFERENCE (EST-OBS)	RELATIVE DIFFERENCE (EST-OBS/OBS)
16	USAF HOSP MATHER	Conus Community Hospital	\$19,528,963	\$19,738,619	1.01	\$17,931,961	(\$1,806,658)	9.2%
17	90th STRAT HOSP-CASTLE	Conus Community Hospital	\$10,298,802	\$10,730,219	1.04	\$12,650,052	\$1,919,833	17.9%
18	1st STRAT HOSP-VANDENBERG	Conus Community Hospital	\$11,116,010	\$13,515,795	1.22	\$13,650,351	\$134,556	1.0%
19	USAF HOSP EDWARDS	Conus Community Hospital	\$8,103,178	\$10,003,010	1.10	\$9,677,162	(\$325,848)	3.3%
20	831st MED GRP-GEORGE	Conus Community Hospital	\$10,149,184	\$9,839,561	0.97	\$10,993,328	\$1,153,767	11.7%
21	22nd STRAT HOSP-MARCH	Conus Community Hospital	\$23,487,242	\$25,126,785	1.07	\$22,662,919	(\$2,463,866)	-9.8%
33	USAF ACADEMY HOSP	Conus Community Hospital	\$25,333,683	\$23,784,520	0.94	\$22,194,630	(\$1,589,890)	-6.7%
36	USAF HOSP DOVER	Conus Community Hospital	\$9,560,288	\$11,483,517	1.20	\$13,093,533	\$1,600,016	13.9%
42	USAF RGN HOSP EGLIN	Conus Community Hospital	\$37,159,946	\$38,047,571	1.02	\$37,506,762	(\$540,809)	-1.4%
43	325th MED GRP-TYNDALL	Conus Community Hospital	\$14,676,026	\$8,686,262	0.59	\$6,638,797	(\$2,047,465)	-23.6%
44	31st MED GRP-HOMESTEAD	Conus Community Hospital	\$18,037,974	\$18,867,495	1.05	\$18,788,236	(\$69,259)	-0.4%
45	58th MED GRP-MACDILL	Conus Community Hospital	\$22,033,143	\$21,787,674	0.99	\$22,192,358	\$404,684	1.9%
46	USAF HOSP PATRICK	Conus Community Hospital	\$11,563,358	\$11,039,141	1.13	\$10,940,275	(\$2,098,866)	-16.1%
50	347th MED GRP-MOODY	Conus Community Hospital	\$9,577,641	\$9,110,194	0.95	\$8,712,098	(\$398,096)	-4.4%
51	USAF HOSP ROBINS	Conus Community Hospital	\$11,688,187	\$10,796,069	0.92	\$9,978,858	(\$817,211)	-7.6%
53	368th MED GRP-MOUNTAIN HOME	Conus Community Hospital	\$8,427,919	\$8,080,246	0.96	\$8,896,519	\$816,273	10.1%
54	USAF HOSP CHANUTE	Conus Community Hospital	\$10,151,221	\$11,322,501	1.12	\$12,670,886	\$1,348,385	11.9%
55	8th STRAT HOSP-BEALE	Conus Community Hospital	\$10,210,767	\$10,631,408	1.04	\$9,522,093	(\$1,109,315)	-10.4%
59	384th STRAT HOSP-MCCONNELL	Conus Community Hospital	\$6,705,822	\$6,855,556	1.02	\$5,801,434	(\$1,054,122)	-15.4%
62	2nd STRAT HOSP-BARKSDALE	Conus Community Hospital	\$16,123,081	\$17,843,812	1.11	\$20,205,316	\$2,361,504	13.2%
63	23rd MED GRP-ENGLAND	Conus Community Hospital	\$9,149,773	\$5,699,156	0.62	\$5,278,067	(\$421,089)	-7.4%
65	42nd STRAT HOSP-LORING	Conus Community Hospital	\$6,444,248	\$7,790,628	1.21	\$9,215,577	\$1,424,949	18.3%
71	379th STRAT HOSP-WURTSMITH	Conus Community Hospital	\$8,068,347	\$9,134,248	1.13	\$8,933,520	(\$200,728)	-2.2%
72	410th STRAT HOSP-K.I.SAWYER	Conus Community Hospital	\$7,961,449	\$7,966,543	1.00	\$7,779,567	(\$206,976)	-2.6%
74	USAF HOSP COLUMBUS	Conus Community Hospital	\$6,339,130	\$6,590,596	1.04	\$5,810,083	(\$780,513)	-11.8%
76	351st STRAT HOSP-WHITEMAN	Conus Community Hospital	\$7,808,479	\$5,933,400	0.76	\$6,514,149	\$580,749	9.8%
77	341st STRAT HOSP-MALMSTRUM	Conus Community Hospital	\$6,823,523	\$7,586,344	1.11	\$8,104,449	\$518,105	6.8%
78	EHRLING BERQUIST RGN HOSP-OFFUTT	Conus Community Hospital	\$23,031,236	\$27,470,164	1.19	\$31,363,789	\$3,893,625	14.2%
79	554th MED GRP-NELLIS	Conus Community Hospital	\$14,779,060	\$15,983,686	1.08	\$16,891,890	\$898,204	5.6%
80	509th STRAT HOSP-PEAC	Conus Community Hospital	\$13,780,744	\$14,259,660	1.03	\$12,854,829	(\$1,404,831)	-9.9%
83	USAF HOSP KIRTLAND	Conus Community Hospital	\$14,839,419	\$16,018,151	1.08	\$16,259,247	\$241,096	1.5%
84	833rd MED GRP-HOLLOWAY	Conus Community Hospital	\$9,873,043	\$9,780,337	0.99	\$10,483,080	\$702,743	7.2%
85	27th MED GRP-CANNON	Conus Community Hospital	\$9,010,615	\$8,504,674	0.94	\$8,322,820	(\$181,854)	-2.1%
87	380th STRAT HOSP-PLATTSBURGH	Conus Community Hospital	\$7,179,024	\$6,675,706	0.93	\$6,942,712	\$267,006	4.0%
88	416th STRAT HOSP-GRIFFISS	Conus Community Hospital	\$9,165,193	\$9,216,574	1.01	\$9,378,031	\$161,457	1.8%
90	4th MED GRP-SEYMOUR JOHNSON	Conus Community Hospital	\$8,599,416	\$12,333,938	1.43	\$14,055,888	\$1,721,960	14.0%
93	842nd STRAT HOSP-GRAND FORKS	Conus Community Hospital	\$8,573,747	\$8,649,947	1.01	\$11,309,860	\$2,659,913	30.8%
94	867th STRAT HOSP-MINOT	Conus Community Hospital	\$11,430,440	\$12,607,090	1.10	\$14,491,765	\$1,884,675	14.9%
96	USAF HOSP TINKER	Conus Community Hospital	\$13,930,307	\$15,782,305	1.13	\$19,630,618	\$3,848,313	24.4%
97	USAF HOSP ALTUS	Conus Community Hospital	\$7,405,695	\$8,260,804	1.12	\$8,691,588	\$430,784	5.2%
101	363rd MED GRP-SHAW	Conus Community Hospital	\$18,556,608	\$12,972,544	0.70	\$9,018,514	(\$3,954,030)	-30.5%
102	394th MED GRP-MYRTLE BEACH	Conus Community Hospital	\$8,176,853	\$8,207,063	1.00	\$8,219,002	\$11,939	0.1%
106	44th STRAT HOSP-ELLSWORTH	Conus Community Hospital	\$11,268,272	\$10,906,449	0.97	\$13,758,855	\$2,852,406	26.2%
111	USAF HOSP REESE	Conus Community Hospital	\$5,974,133	\$6,901,670	1.16	\$7,035,426	\$133,756	1.9%
112	98th STRAT HOSP-DYESS	Conus Community Hospital	\$11,517,238	\$11,875,193	1.03	\$14,562,966	\$2,687,773	22.6%

Continued

*Total MEPRS inpatient and ambulatory expenses exclude occupational health (BHG) and PRIMUS/NAVCARE (BHH) expenses.

EXHIBIT 4-3: FY88 AIR FORCE ESTIMATED AND OBSERVED O&M AND MILPERS EXPENSES
(CONCLUDED)

DMIS ID	FACILITY	FACILITY TYPE	FY88 OBSERVED TOTAL MEPRS INPATIENT AND AMBULATORY EXPENSES*	FY88 OBSERVED O&M AND MILPERS EXPENSES (PECS 08077110807782)	FY88 O&M AND MILPERS MULTIPLIER	FY88 ESTIMATED O&M AND MILPERS EXPENSES	ABSOLUTE DIFFERENCE (EST-OBS)	RELATIVE DIFFERENCE (EST-OBS/OBS)
113	USAF RGN HOSP SHEPPARD	Conus Community Hospital	\$24,784,264	\$25,496,495	1.03	\$23,162,407	(\$2,334,088)	9.2%
114	USAF HOSP LAUGHLIN	Conus Community Hospital	\$5,681,230	\$6,414,914	1.13	\$7,299,724	\$884,810	13.8%
115	87th MED GRP BERGSTROM	Conus Community Hospital	\$12,155,016	\$13,182,523	1.08	\$12,031,843	(\$1,150,680)	-8.7%
116	R THOMPSON STRAT HOSP-CARSWELL	Conus Community Hospital	\$28,171,268	\$28,334,349	0.82	\$24,716,563	(\$3,454,705)	-12.3%
119	USAF HOSP HILL	Conus Community Hospital	\$10,707,124	\$13,576,538	1.27	\$16,648,100	\$3,071,562	22.6%
120	1st MED GRP-LANGLEY	Conus Community Hospital	\$22,964,825	\$24,566,199	1.07	\$25,410,076	\$843,877	3.4%
128	92nd STRAT HOSP FAIRCHILD	Conus Community Hospital	\$13,432,421	\$13,613,301	1.01	\$14,731,818	\$1,118,517	8.2%
129	90th STRAT HOSP F.E. WARREN	Conus Community Hospital	\$9,495,858	\$9,869,751	0.93	\$9,374,742	\$504,991	5.7%
14	DAVID GRANT MED CTR-TRAVIS	Medical Center	\$56,102,335	\$52,972,582	0.94	\$61,528,071	\$8,555,489	16.2%
55	USAF MED CTR SCOTT	Medical Center	\$42,299,345	\$41,619,153	0.98	\$42,916,012	\$1,296,859	3.1%
66	MALCOM GROW MED CTR-ANDREWS	Medical Center	\$53,902,435	\$61,659,941	1.14	\$66,921,374	\$5,261,433	8.5%
73	USAF MED CTR KEESLER	Medical Center	\$65,686,653	\$64,072,435	0.98	\$65,586,278	\$1,513,843	2.4%
95	USAF MED CTR WRIGHT-PATTERSON	Medical Center	\$67,289,261	\$67,289,261	1.16	\$65,465,323	(\$1,823,938)	-2.7%
108	BROOKE AMC (UNMCI) FT SAM HOUSTON	Medical Center	\$128,013,281	\$55,532,204	0.43	\$58,292,450	\$2,760,246	5.0%
117	WILLFORD HALL MED CTR-LACKLAND	Medical Center	\$180,862,167	\$138,363,681	0.77	\$119,300,532	(\$19,063,149)	-13.8%
626	USAF HOSP BITBURG	Overseas Hospital	\$7,226,244	\$9,470,265	1.31	\$12,092,357	\$2,622,092	27.7%
627	USAF HOSP HAHN	Overseas Hospital	\$7,276,946	\$8,661,340	1.19	\$9,893,804	\$1,222,464	14.2%
628	USAF RGN MED CTR WIESBADEN	Overseas Hospital	\$29,445,468	\$320,376	0.03	\$806,824	(\$113,552)	-12.3%
629	USAF HOSP LAJES	Overseas Hospital	\$4,142,432	\$4,287,940	1.04	\$4,298,012	\$10,072	0.2%
630	USAF HOSP TORREJON	Overseas Hospital	\$9,246,035	\$9,018,590	0.98	\$9,854,198	(\$164,392)	-1.8%
631	USAF HOSP HELLENKON	Overseas Hospital	\$3,428,586	\$4,376,449	1.28	\$5,922,473	\$1,546,024	35.3%
632	USAF HOSP UPPER HEYFORD	Overseas Hospital	\$11,263,158	\$8,278,257	0.73	\$7,291,804	(\$986,453)	-11.9%
633	USAF RGN HOSP LAKENHEATH	Overseas Hospital	\$12,663,654	\$11,936,262	0.94	\$14,782,353	\$2,846,091	23.8%
634	USAF HOSP IRAKLON	Overseas Hospital	\$2,270,734	\$2,094,495	0.92	\$2,632,293	\$537,798	25.7%
635	USAF HOSP INCIRLIK	Overseas Hospital	\$7,535,001	\$2,260,623	0.30	\$1,833,032	(\$427,591)	-18.9%
636	13th MED CENTER CLARK AB	Overseas Hospital	\$31,425,378	\$32,580,718	1.04	\$30,832,423	(\$1,748,295)	-5.4%
637	8th MED GRP-KUNSON AB	Overseas Hospital	\$4,361,632	\$4,279,222	0.98	\$3,509,778	(\$769,444)	-18.0%
638	51st MED GRP-OSAN AB	Overseas Hospital	\$7,914,332	\$8,867,415	1.12	\$8,625,152	(\$242,263)	-2.7%
639	432nd MED GRP-MISAWA	Overseas Hospital	\$8,759,249	\$8,402,873	0.96	\$7,417,579	(\$965,294)	-11.7%
640	475th MED GRP-YOKOTA AB	Overseas Hospital	\$11,546,992	\$8,149,156	0.71	\$6,210,014	(\$1,939,142)	-23.8%
	ALL USAF FACILITIES		\$1,663,565,967	\$1,554,623,294	0.93	\$1,555,703,033	\$1,079,739	0.1%

*Total MEPRS inpatient and ambulatory expenses exclude occupational health (BHG) and PRIMUS/NAVCAFE (BHH) expenses

modeling error was quite similar to that presented in *Development of Cost Models to Support Diagnosis Related Management*.¹ A summary of the modeling results is presented below.

The first row of the table below displays the number of facilities that have greater than a 25% difference between estimated and observed expenses. The second row provides the number of facilities that were modeled within each Service branch and facility type category.

		<u>Medical Centers</u>	<u>CONUS Hospitals</u>	<u>Overseas Hospitals</u>	<u>Clinics</u>	<u>Total</u>
Army	>25% Error Modeled	0 7	3 29	2 11	0 2	5 49
Navy	>25% Error Modeled	0 4	6 21	1 8	1 12	8 45
USAF	>25% Error Modeled	0 <u>7</u>	4 <u>60</u>	3 <u>15</u>	11 <u>38</u>	18 <u>120</u>
DoD Total	>25% Error Modeled	0 18	13 110	6 34	12 52	31 214

Note, 25% estimate error is a practical measure for selecting outliers and is not meant to imply statistical significance. The table shows that nearly 40% (12 of 31) of the facilities with greater than 25% estimate error were clinics. Additionally, only 19 of 162 hospitals considered had greater than a 25% estimate error and 6 of these 19 hospitals were Navy CONUS Hospitals. Thus, while 31 facilities had greater than 25% estimate error, 17 of these facilities were either USAF clinics or Navy CONUS Community Hospitals. A review of these facility's data may identify data reporting problems or methodology enhancements that will reduce modeling error.