

A Feasibility Analysis: Outsourcing Navy OCONUS Medical Billets

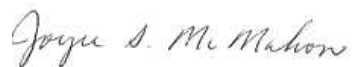
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Executive Summary

Background

DOD has engaged in military-to-civilian conversions as part of a strategic approach to both shape the force and reduce costs for more than a decade. Increased operational tempo, a necessity to recapitalize resources for modernization efforts, and budget constraints provided the primary catalysts for conversion efforts. Through the Medical Readiness Review (MRR) component of the Quadrennial Defense Review (QDR), the Navy recommended that military positions within medical treatment facilities (MTFs) located outside the continental United States (OCONUS) be reviewed for possible military-to-civilian conversions. These conversions to either civilian or contract employees would occur during the period of Fiscal Years (FY) 2008 through 2013. To accomplish this initial review, the Director of Medical Resources, Plans, and Policy Division (N931) asked The Center for Naval Analyses (CNA) to conduct an assessment of the feasibility of converting 336 OCONUS active duty Navy billets. This feasibility assessment focuses on the impact of executing billet conversions as they relate to costs, quality of care, access to care, recruitment and retention, and medical readiness.

Approach

We evaluated the feasibility of executing military-to-civilian conversions in OCONUS hospitals and clinics, within the constraints of the National Defense Authorization Act for FY 2007 (FY07 NDAA), which states the following:

The Secretary of the military department may not convert any military medical or dental position to a civilian medical or dental position in a fiscal year until the Secretary submits to the congressional defense

committees with respect to that fiscal year a certification that the conversions within that department will not increase cost or decrease quality of care or access to care [1].

Conceptually, military-to-civilian conversions are a means to shape the workforce and generate economic efficiencies. For this analysis, we focus on the following sources as conversion options.

Eliminate the billet without replacement

Because this study is not intended to be an efficiency review to define requirements, we did not consider opportunities to eliminate billets. However, we did conduct a comparative analysis between the workload and resources required to meet demand within CONUS military treatment facilities, compared to OCONUS activities to identify potential efficiencies. We also reviewed facility closures, command initiated business transformation plans (where available), and product lines or specialties selected for system-wide civilian conversions to understand how the existing OCONUS resources are being used.

Hire local nationals

Hiring local nationals is constrained within the limits of local labor laws, DOD regulations, Status of Forces Agreements (SOFAs), structures of health insurance programs in other nations, and availability of qualified workers. Following an extensive literature review of the national health systems and the SOFAs, we conducted site visits to five of the Navy medical treatment facilities (MTFs) under consideration for conversions and interviewed subject matter experts within the MTF, the Human Resource Service Centers (HRSCs) with Human Resource Offices (HROs), and representatives from line activities with oversight in the region to enhance our understanding of local opportunities and challenges.

Hire dependents of military assigned OCONUS

Evaluation of the feasibility of hiring dependents of military members stationed overseas was based upon an assessment of the number of working age dependents reported within Defense Eligibility Enrollment Reporting System (DEERS), employment data from the Bureau of Labor Statistics (BLS), and survey results from the 2006 Navy Spouse Survey sponsored by the Chief of Naval Personnel. These data sources provided a rough estimate of the size of the pool of potential applicants and reasons why spouses in OCONUS sites either choose not to seek work or encounter obstacles to their job search.

Hire civil service or contract employees from CONUS to work OCONUS

Feasibility of hiring civilians or contract support from CONUS for relocation overseas relied heavily upon the Navy experience to date with military-to-civilian conversion within CONUS, in combination with the BLS estimates of the availability of various specialties within the general population. We used the dollars for financial incentives available under Office of Personnel Management (OPM) overseas assignment policies to assess the cost implications of this option. In addition, we reviewed lessons learned from the Educational and Developmental Intervention Service (EDIS) program as a guideline to contracts.

Expand the preferred provider network (PPN) overseas

Finally, to evaluate opportunities and constraints with expanding the preferred PPN overseas, we conducted interviews with the TRICARE Management Activity (TMA), TRICARE Area Offices (TAOs), and the military treatment facilities. Since obtainable data regarding costs and availability of health care workers within each nation were limited, we extracted purchased care data from the Military Health System (MHS) Management Analysis Reporting Tool (M2) to develop a range of potential costs and availability of services.

Major findings

Opportunities exist, but there are substantial risks and challenges

Although there are opportunities to civilianize some Navy active duty OCONUS medical billets, we found that there are substantial risks involved with the magnitude of the conversions as defined by the QDR. Moreover, we found that the lack of a consistent and robust OCONUS health care network leaves beneficiaries assigned overseas without a reliable source of care if converted billets are not consistently filled; such a situation would result in diminished access to and quality of military health care.

We also found that there is some limited opportunity to expand the PPN capacity in Europe. However, the current lack of a formalized network and inability to enter into direct contracts for support make relying on these agreements as a means to convert military billets risky until the reliability of such agreements is proven. That said, the data suggest that entering into partnerships with the local providers for using a fee-for-service arrangement for services is cost-effective and potentially more economically efficient than full-time support within the MTF, particularly for services where the workload is insufficient to fully occupy a full-time provider.

Potential cost savings exist, but feasibility severely limits options

Given the feasibility of hiring personnel from the various sources, we estimate that annual cost savings from conversion range between \$3.7 million and \$6.1 million. The low estimate is for conversion of 64 “administrative” positions only. The higher estimate is for conversion of an additional 105 Navy billets in clinical settings. The data suggest that the most cost-effective source for acquiring civilian labor is from the local market (either local nationals or military dependents). Our analysis suggests that hiring contractors has the least amount of cost savings. However, our literature review and interviews with subject matter experts suggest that there are risks associated with the availability of qualified local nationals.

Serious limitations to executing conversions from the local nationals market are availability of qualified professionals and the automated data processing (ADP) background restrictions. Additionally, we found that the laws in Italy and Spain prohibit background investigations, which restricts their access to ADP systems essential to patient care. Moreover, findings from the 2006 Navy Spouse Survey suggest that 70 percent of spouses in overseas activities choose not to be employed [2].

The alternative option of hiring civilians from CONUS (either civil service or contract) is possible, but difficulties with conversions in CONUS suggest there is also an insufficient U.S. labor market to attract providers, which may require additional incentives. Furthermore, our discussions with the HROs and MTF commands suggest that this may be an impractical option for lower salary positions because people may be unwilling to move OCONUS for these types of jobs.

Europe will be tough, Japan even more difficult

Evidence suggests that conversions of large numbers of overseas medical billets will be difficult to execute in Europe and that they will be nearly impossible to implement in Japan. Furthermore, we don't think a test pilot program for OCONUS medical billet conversions is required because we found that the potential cost savings of these conversions isn't significant enough to outweigh the considerable risks.

Introduction and background

Through the MRR component of the QDR, the Navy recommended that approximately 1,600 military positions within medical treatment facilities (MTFs) located outside the continental United States (OCONUS) be reviewed for military-to-civilian conversions. Another approximately 1,400 military positions were temporarily deferred from consideration, but must be reviewed periodically. These conversions to either civilian or contract employees would occur during the period of Fiscal Years (FY) 2008 through 2013. Because DOD reports success with these conversions, continued competitive sourcing of military functions as a workforce shaping tool continues to be a key component of the future years defense plan (FY08 through FY13) [3].

We begin our feasibility study report with a background overview and discussion of recent changes to the Navy medical department billet profile and military-to-civilian CONUS conversion experiences. With this background, we then estimate the potential savings from converting 336 active duty OCONUS billets as a function of feasibility. We follow this discussion with a review of the health care systems and labor markets in each of the nations under consideration. Finally, we present the opportunities and challenges involved with options for military-to-civilian billet conversions. We include our evaluation of the “non-cost” factor considerations: quality, access, retention and recruitment, and medical readiness.

Recent billet changes

Increased operational tempo of military forces deployed in support of the Global War on Terrorism (GWOT), combined with budget constraint pressures, has compelled DOD to take actions towards better aligning military functions and personnel to war-fighting capabilities [4]. Table 1 summarizes the Navy medical department active duty billets that were programmed for conversion or

elimination since FY03, sorted by budget submission office (BSO). Of the 4,777 billets, only 72 were OCONUS reductions and no OCONUS billets were targeted for conversion. The vast majority (93 percent) of the billet reductions were shore billets.

Table 1. Navy medical department billets programmed for conversion or elimination of function (FY03 through FY11)

Sea/shore location category	Officers	Enlisted	Total
--Arduous Sea	1	0	1
--Overseas Shore	19	43	62
--Shore	971	3,131	4,102
<u>BUMED Total</u>	<u>991</u>	<u>3,174</u>	<u>4,165</u>
--Arduous Sea	9	25	34
--Non-rotated Sea	16	59	75
--Overseas Shore	1	9	10
--Sea	38	196	234
--Shore	42	289	331
<u>Other BSO Total</u>	<u>106</u>	<u>506</u>	<u>612</u>
MRR and PDM IV conversions	<u>312</u>	<u>1,316</u>	<u>1,628</u>
<u>Total</u>	<u>1,409</u>	<u>4,996</u>	<u>6,405</u>

Source: Navy Total Force Manpower Management System (TFMMS) as of end November 2006. Medical Requirements Review (MRR) and Program Decision Memorandum (PDM) data from N931.

These reductions and conversions stemmed from various sources:

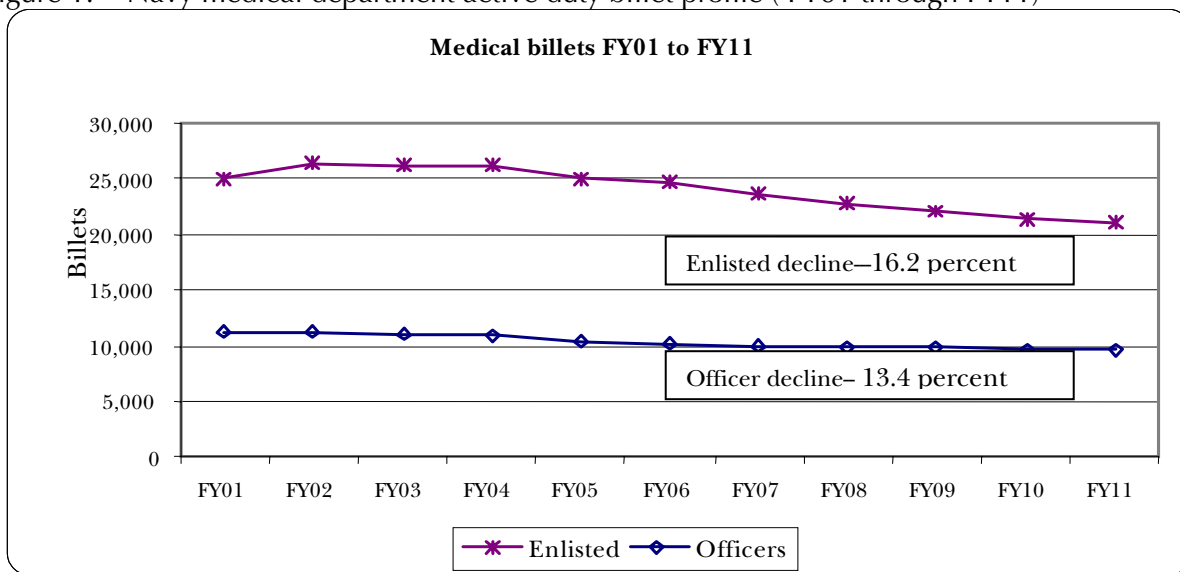
- **Program Budget Decision 712 (PBD-712).** In December 2003, DOD directed large-scale force shaping actions to convert medical military billets to civilians via PBD-712. It directed that 2,169 Navy military billets be converted to civilians. Over 80 percent of these billets (1,772) were within the DHP. Specifically, Navy DHP was directed to convert 536 officers and 1,236 enlisted billets to civilians in FY05.
- **Program Objective Memorandum FY2006 (POM-06).** Navy Medicine identified another 3,643 billets for conversion or deletion between FY06 and FY12 as part of the POM-06. The POM-06 action, combined with PBD-712, represented a total of 5,415 (3,643 + 1,772) medical department billets that were

programmed for conversion or deletion over the FYDP (FY05 through FY11).

- **Other billet reductions.** An additional 748 Navy medical billets were eliminated through the FYDP outside of PBD-712 and POM-06.

Although Navy Medicine’s active duty billet structure has been declining since FY03, figure 1 shows that the billet reductions have occurred over a gradual period of time, which helps mitigate the impact of these reductions on recruiting and retention plans. The enlisted billet structure has declined by about 16 percent since FY02, while the officer billet profile has decreased a little over 13 percent during that same time.

Figure 1. Navy medical department active duty billet profile (FY01 through FY11)



Source: Health Manpower Personnel Data System, Defense Manpower Data Center; Total Force Manpower Management System Micro Manpower Change Application as of October 2006

Sea/shore billet ratio

Getting the correct sea/shore rotation for enlisted and officer communities in an environment of billet reductions presents unique challenges. Table 2 shows that just over half of the remaining 21,683 medical enlisted billets past FY11 are at CONUS shore duty stations (67 percent).

Table 2. Navy medical department active duty billets remaining after FY11
(excludes student and reserve billet authorizations)

Commercial activities reason ^a	Enlisted	Officer	Total
A – Direction and control of combat and crisis situations	43	26	69
B – Exemptions for combat support and combat service support due to operational risk	148	61	209
D – Exemption for manpower dual-tasked for wartime requirements	10,009	4,498	14,507
E – Civilian authority direction and control	28	80	108
F – Military unique knowledge and skills	1,470	1136	2,606
G – Exemption for spirit de corps	71	67	138
I – Military augmentation of the infrastructure during war	2	1	3
J – Exemption for civilian and military rotation	264	0	264
K – Exemption for civilian and military career progression	212	1915	2,127
M – Exempted by DOD management	17	21	38
P – Pending restructuring of commercial activities	16	3	19
R – Subject to review for competition under OMB circular A-76	1,448	770	2,218
X – Alternatives to A-76	3	1	4
Z – In Progress BSO initiative	799	181	980
Total Shore (CONUS and OCONUS)	14,530	8,763	23,293
CONUS subtotal	12,213	7,603	19,816
OCONUS subtotal	2,317	1,160	3,477
Sea or operational subtotal	7,153	1,101	8,254
Total billets	<u>21,683</u>	<u>9,864</u>	<u>31,547</u>

^a Commercial activities Reason categories are identified by sea/shore code with CONUS Shore in category 1 and OCONUS Shore in category 2. Sea and operational billets include CONUS Sea in category 2, overseas remote in category 3, and non-rotational sea in category 4. Billets with invalid commercial activity code or blank sea/shore code (19 enlisted and 15 officer billets) are not included in this table
Source: Total Force Manpower Management System (TFMMS) Micro Manpower Change Application (TMMCA) as of end February 2007.

It is important to note that a little over 63 percent of these enlisted shore billets are dual-tasked for wartime requirements.¹ In essence, this leaves only 4,330 enlisted billets on shore commands (CONUS and OCONUS), without a wartime requirement or potential for de-

¹ The phenomenon of having a shore duty rotation that is also a deployment requirement results from Navy Medicine’s medical augmentation program (MAP), which identifies those billets needed for operational support in excess of full-time deployed platforms with the fleet or Marine Corps.

ployment. When viewed from the perspective that 7,153 enlisted billets are at sea or with operational units, it is not difficult to see that managing shore duty rotations will be increasingly complicated. Officers have a relatively larger rotation base of their remaining billets located on shore activities in CONUS than the enlisted, but 44 percent of these are dual-tasked to wartime requirements.

Recent attention to the operational stress of deployments has driven policies to not redeploy sailors for 365 days after they return from deployment and to extend rotation dates out to compensate for time away from their shore station [5]. These policies further complicate management of shore duty rotations. Placed in perspective, as of the end of December 2006, there were 898 enlisted personnel deployed from Navy Medicine shore-based activities, for an average deployment of 240 days.² In effect, this further detracts from shore duty opportunities for sailors coming off of sea duty and reinforces the notion that shore duty can mean unpredictable periods of deployment. Studies have noted that a reasonable number of deployments are preferable to no deployments [6], but that unpredictability of deployments has been cited as a concern affecting retention decisions for both officers and enlisted. The RAND findings were corroborated with surveys conducted by the Defense Manpower Data Center (DMDC) and the Navy Personnel Research Science and Technology lab [7].

CONUS billet conversions

We think it is reasonable to assume that the conversion of military-to-civilian medical billets overseas will pose at least as many, if not more, of the same challenges experienced in CONUS. Consequently, we focus on recent CONUS billet conversions that Navy Medicine has executed as a starting point to our analysis. Tracking the progress of military-to-civilian conversions is much more complicated than simply matching a converted military billet to a civilian. Billets were not replaced on a one-for-one basis. Commanding

² Contingency tracking system data from the Defense Manpower Data Center suggests that this is the average number of medical enlisted personnel deployed over the past three fiscal years.

officers were given the maximum flexibility possible to recapitalize the dollars and redefine their business practices. This guidance was fully consistent with the vision of the Medical Quadrennial Review to transform the force, the infrastructure, and the business [8]. As such, when directed to execute military conversions, military treatment facilities looked at their business practices and eliminated excess capacity when possible to reinvest funds towards developing more effective processes. That decision to reinvest in business transformation processes was evident in the Navy Medicine POM-06 decision to recapitalize a number of billets as divestitures rather than conversions.

Congress included verbiage in the FY06 NDAA, which required the Services to certify that conversions would not negatively impact cost, quality, or access.³ However, when that legislation was enacted, the conversion process was already well underway and funding for military billets was already eliminated. As reflected in table 3, as of the end of November 2006, about 79 percent of all the scheduled Navy medical department billet conversions for FY05 and FY06 have been fully executed.

Table 3. Total Navy medical department FY05-06 CONUS billet conversions and civilian hires (as of November 2006)

	FY05	FY06	Total
Number of billets to be converted	1,223	153	1,376
Total executed	996	77	1,073
Percent executed	81.4%	50.3%	78.8%

Source: Bureau of Medicine and Surgery (M1)

We reviewed the CONUS medical billet conversion experience to better evaluate the feasibility of OCONUS conversions. In general, there were two major areas of concern that were important to our analysis: hiring lags and specialty and regional challenges.

Hiring lags

Hiring lags can be a serious issue because of the amount of time a billet remains open before it is refilled. Such gaps have the poten-

³ The NDAA does not require certification for billet deletions.

tial to create serious quality, access, and continuity of care issues within MTFs. The following provide some specific information on hiring lags.

- On average, the time to fill a civilian position is 5 to 6 months after the initial request is sent to the civilian Human Resource Office (HRO) for action.
- If the position does not have to advertise outside of DOD, the processing time can be reduced by about 2 months.
- The longest lag times occur during the actual selection process from the time the certification notification is returned to the HRO and the time for the selectee to complete all final requirements to report for duty. These requirements include notification to their previous employer, background checks, credentials verification, and, to a lesser extent, relocation.
- Data from selected medical series represented within the Navy Medicine activities only suggest that there are regional variations in the time it takes to hire a civilian. These variations may be due to factors such as availability of personnel, a desire to relocate to certain areas, or the local processes.

Specialty and regional challenges

In addition to hiring lags, certain specialties (or skills) and geographical regions present hiring challenges in CONUS. The following lists some of these challenges, which we think would only be exacerbated in OCONUS:

- The most problematic medical specialties to hire as civil service employees are physicians, dentists, licensed⁴ practical nurses, nursing assistants, and medical technicians.
- Delays in recruitment actions were impacted by uncertainties and concerns about the transfer of dollars needed to execute

⁴ Medical technicians include nuclear medicine technicians, cardiovascular technicians, physical therapy technicians, diagnostic radiology technicians, and laboratory technicians.

conversions, challenges of hiring lower grade civilians in high-cost or undesirable geographical areas, or availability of qualified personnel.

- Vacant civilian billets appear to be impacted by the inability to attract highly technical specialists who can earn substantially more as a contractor or with another agency. For example, nuclear medicine technicians are being recruited as GS-7s, with a mid-range salary of \$35,972 in FY07 dollars. Current contracts within Navy Medicine report an average cost of \$89,534, which corresponds to the Bureau of Labor Statistics report that in May 2004, the middle 50 percent of all nuclear medicine technicians surveyed earned a range between \$53,001 and \$73,388 in 2007 dollars [9].
- In May 2006, the Government Accountability Office (GAO) reported that Navy was recruiting for physicians, dentists, pharmacists, and laboratory officers, on a national level, but were limiting their search processes for other positions to the local level [10]. GAO also reported that Navy was using bonus programs to compete with other employers, both public and private.
- Navy has spent approximately \$446,353 on recruitment bonuses plus an additional \$94,913 in relocation bonuses over the past 2 fiscal years. Physicians received the highest level and number of the recruitment bonuses, with eight bonuses ranging from \$45,025 to \$4,417 (average value of \$23,070).
- The GAO report noted that the Bureau of Labor Statistics had found that nurses were in short supply across the nation and were considered to be difficult to hire and retain, driving up competition for their services among all potential employers. Despite concerns over specific specialties, the GAO concluded that there were no obvious impacts on quality, access, medical readiness, recruiting, or retention as a result of military-to-civilian conversion. However, they advised that the full cost impact of conversions was unknown due to the lack of full costing of the military positions. This finding was based upon the concern that Services were not including the full life-cycle costs of military personnel, which include

training, recruitment, and other costs needed to support a military position. Additionally, it was unclear whether estimated civilian costs reported in the certification were based on actual or anticipated compensation.

- Estimates of hiring lags do not reflect the inherent problems with the inability to hire certain specialties that may represent sole providers in smaller facilities. Review of the civilian hiring data suggests that there are positions that remain vacant for extended periods of time that necessitate temporary additional duty (TAD) coverage from other facilities. This adversely affects the mission capability of the military health system.

In summary, our review of the CONUS military-to-civilian billet conversion experience suggests that this process is doable but difficult. Of particular concern are the lag times between the time a recruitment action is initiated and the time the positions are actually filled, which are often lengthy. The OCONUS HROs advise that the requirement for overseas medical screens and dependent health certifications can extend the timeline to recruit and attain required personnel by several weeks. For example, an additional delay for contractors or GS hires selected for positions in Rota, Spain, can be delayed for 6 to 8 weeks awaiting country clearance approval from the Spanish government. Bottom line, the alternative option of hiring civilians from CONUS (either civil service or contract) is possible, but difficulties with conversions in CONUS suggest that there might be an insufficient U.S. labor market to attract certain types of required health care professionals overseas, without requiring additional incentives.

Let's now turn our attention to estimating the potential cost savings from OCONUS conversions as a function of feasibility.

Cost and feasibility

In this section, we detail the potential cost savings from OCONUS military-to-civilian conversions as well as explore some issues related to feasibility. We note here that Navy Medicine initially earmarked 627 billets for conversion but then identified 291 billets for elimination without civilian replacement, leaving 336 billets for us to consider in assessing the feasibility of military-to-civilian conversions. The decision to eliminate these billets was based on base closures, facility business transformation plans, and regional and headquarters data analysis.

In this segment, we first provide an overview of the billets under consideration for conversion and detail how we estimated these costs and of the costs of non-military personnel options for these billets. Second, we estimate potential costs savings. We do this using an incremental approach starting with potential savings estimates without regard to whether the conversions are feasible. Then, we apply various feasibility constraints to provide cost savings estimates in more realistic scenarios. We also provide a discussion of how accounting for full-time equivalency differences between military and non-military personnel and accounting for training costs would potentially impact cost savings. Finally, we explore the feasibility of relying on the active duty family member population for certain skill sets.

Nature of billets under consideration

The billets identified for conversion appear to have been selected with careful consideration for operational requirements and career progression. Additionally, as depicted in table 4, the conversions are spread across several years, which could provide opportunity to test conversions in FY08 and adjust the plan for conversions should they be deemed unexecutable.

Table 4. OCONUS billets under consideration by designator/rate and conversion year

Designator/rate	FY08	FY09	FY10	Total
Medical corps	0	1	12	13
Dental corps	0	2	6	8
Medical service corps	1	10	34	45
Nurse corps	0	17	43	60
Hospital corpsman	5	75	130	210
<u>Total</u>	<u>6</u>	<u>105</u>	<u>225</u>	<u>336</u>

Source: Director of Medical Resources, Plans, and Policy (N931)

Navy Medicine has identified the enlisted specialties of urology, nuclear medicine, dialysis, and dermatology technicians as lacking an operational rotation base and has targeted these product lines for system-wide conversion to civilian positions. Other technical specialties with similar issues of small community size and lack of operational requirements, thereby making career progression difficult to manage, include cast room, nuclear medicine, cytopathology, cardiovascular, and biomedical photo technicians. Converting these non-operational specialties and programs provides an opportunity for the military to focus career management efforts and training dollars on the operationally oriented specialists.

The same rationale described above for enlisted has been applied to officers, rendering them a focus for military-to-civilian billet conversions. Additionally, specialties with chronic manning shortages are also considered because these specialists have been historically difficult to recruit and/or retain.⁵ As such, military-to-civilian billet conversions present an opportunity to fill requirements with civilians and to balance the force structure, within the limits of maintaining those military essential billets with uniform personnel. For example, chronic shortages have created gaps in billets for clinical psychology, health care administration, critical care nurses, family practice, and general surgery. Specialties with limited operational require-

⁵ Please see tables 33-37 in Appendix A for the current Navy medical department community inventory versus billet levels, for all specialties.

ments include pediatricians, manpower analysts, dietitians, audiologists, and social workers.

Of the 336 OCONUS billets we examined for conversion, 62.5 percent are enlisted personnel. Table 5 shows that these potential conversions are concentrated in Yokosuka, Okinawa, and Naples, which account for 265 of the 336 conversions.

Table 5. OCONUS medical billets under consideration for conversion

Location ^a	Enlisted	Officers	Total
Yokosuka	46	45	91 (27.1%)
Okinawa	50	40	90 (26.8%)
Naples	66	18	84 (25.0%)
Sigonella	24	8	32 (9.5%)
Rota	14	10	24 (7.1%)
Guam	10	3	13 (3.9%)
Cuba	0	2	2 (0.6%)
Total	210 (62.5%)	126 (37.5%)	336

a. The billet figures for Yokosuka, Naples, and Sigonella include those billets at clinics that are under the facility's command.

Estimating personnel costs

For our cost analysis, we considered four non-military labor options for the military-to-civilian conversions:

- Local nationals
- GS ADFMs—GS civilians hired from the active duty family member (ADFM) population living near the OCONUS facility
- GS CONUS—GS civilians hired CONUS to work OCONUS
- Contractors

In order to estimate the potential cost savings for any conversions, we must estimate the personnel costs for each of these four non-military options as well as for military personnel. Table 6 denotes

the factors that drive personnel costs for the various options.⁶ We estimated all personnel costs in FY07 dollars.

Table 6. Personnel cost factors by personnel type

Military	Local nationals	GS ADFMs	GS CONUS	Contractors
1. Composite rate less BAH and PCS	1. Base pay	1. Base GS pay	1. Base GS pay	1. CONUS contract cost
2. OHA and utilities	2. Fringe benefits	2. Post allowance	2. LQA ^b	2. Dollar equivalent of LQA, post allowance, and hardship pay
3. COLA		3. Hardship pay ^a	3. Post allowance	
4. PCS OCONUS costs		4. Fringe benefits	4. Hardship pay ^a	3. 18% contract fee on dollars in 2.
			5. Fringe benefits	
			6. PCS costs	

a. Hardship pay is only applicable to Bahrain, Cuba, and Diego Garcia.

b. Living Quarter Allowance.

We computed military personnel costs as the FY07 Navy composite rate with adjustments and additions. The composite rate is an average measure of what Navy personnel cost by rank across the entire Navy. These costs include basic pay, BAH (basic allowance for housing), BAS (basic allowance for subsistence), incentive pay, retirement pay accrual, health care accrual, PCS (permanent change of station) costs, and other benefits. Because this is an average, we adjust it to get a cost estimate that is location specific. We do this by removing the BAH costs and replacing them with OHA (overseas housing allowance), COLA (cost of living allowance), and utility allowances. Additionally, we replace the average PCS cost in the composite rate with the average PCS costs for overseas moves.⁷

⁶ Additional information regarding various pay and allowances is provided in the table 38 of Appendix A.

⁷ We estimated PCS costs for CONUS and OCONUS moves at the averages for operational and rotational moves, respectively. For enlisted, this is \$5,333 for CONUS and \$10,326 for OCONUS. The figures for officers are \$9,852 (CONUS) and \$18,651 (OCONUS). Note that these costs are variable depending upon geographical location. For example, HRO Sigonella reports that there budget estimates for moves in are \$32,000 and \$30,000 for moves out.

Costs for local nationals are based on pay scales negotiated with the host country. They also receive fringe benefits, which we estimated at 50 percent of base pay for Japan and 54 percent for Europe.⁸

Costs for GS civilians hired from the ADFM population living near the OCONUS facility are the same as costs for those hired from CONUS except that the civilians do not receive LQA (living quarters allowance).

Costs for GS civilians hired CONUS to work OCONUS are computed as GS base pay plus LQA, post allowance,⁹ hardship pay, and fringe benefits at 36.45 percent of base pay [11].

For contract labor, we estimated costs based on the average CONUS contract costs for each job type where there were data. To adjust these contract costs for OCONUS contracts, we added in the dollar equivalency of LQA, post allowance, and hardship pay as an estimate of the enticement necessary to get a contractor OCONUS compared to CONUS. Finally, we added an additional 18 percent to the enticements pay as an estimate of the contract fee.¹⁰

To summarize the costs of the various conversion options, table 7 compares them to the costs of an E-5 hospital corpsman working in in-house care. For either Naples or Okinawa, the military labor is cheaper in this example than GS civilians hired in CONUS to work OCONUS or contract labor. However, local nationals and GS ADFMs are substantially less costly than military labor (assuming

⁸ The HROs provided us with the fringe benefits percentages for local nationals. The 54 percent figure for Europe was from the Naples HRO, and the 50 percent was from the Yokosuka HRO.

⁹ We estimated GS pay at the step-5 level. GS civilians may also receive an education allowance for their dependents or put them in the local DOD school. We note this as a potential benefit, but we did not include it as a cost. Additionally, note that LQA, post allowance, and hardship pay are all non-taxable. Because we are concerned with DOD costs for personnel (and not the value to the worker), we do not adjust these pays to find their taxable equivalent.

¹⁰ NAVMEDLOGCOM estimates that the contract fee on its contracts is between 15 and 21 percent. We used the midpoint of this range (18 percent) as our estimate.

these labor options are viable). Note that these figures for Naples and Okinawa are representative of the other OCONUS locations.

Table 7. Example of conversion costs by labor type

Labor type	Naples cost	Okinawa cost
Military (E-5)	\$94,279	\$85,611
Local national	\$49,938	\$42,153
GS ADFM (GS-6)	\$54,819	\$49,494
GS CONUS hire (GS-6)	\$96,161	\$90,636
Contractor	\$98,256	\$91,737

Potential cost savings

As a first step to estimating potential cost savings, we computed for each individual billet whether the non-military personnel options were less costly than military personnel. We ignore, for the moment, the issue of feasibility—can the Navy actually find and attract people from the various options?

We found that in every instance in which local national options were available (all OCONUS locations except for Guam, Diego Garcia, Cuba, and Bahrain), they were less costly than military personnel as table 8 shows. So of the 336 possible conversions, local nationals are less costly than the military in 319 cases and not an option in the other 17 cases.

Table 8. Number of billets for which non-military are less costly

	Local nationals	GS ADFMs	GS CONUS	Contractors	All options combined
Non-military less costly than military	319	329	141	56	336
Non-military more costly than military	0	6	195	227	0
Non-military option not available	17	1	0	53	0
Total	<u>336</u>	<u>336</u>	<u>336</u>	<u>336</u>	<u>336</u>

In terms of cost, the next least costly option is GS civilians who are hired from the local ADFM population. We estimate that these per-

sonnel would be less costly than military personnel in 329 cases of the 335 instances where they are an option.¹¹ For GS civilians hired in CONUS to work OCONUS less costly than the military in 141 of 336 cases. This is a substantial change from the GS ADFM result of 329 cases where the military is more costly. Recall that the difference between GS ADFMs and GS hired in CONUS is the LQA and the cost to move people OCONUS. These costs tip the scales toward the military being less costly than GS in 189 of the 329 cases where GS ADFMs are less costly than military personnel.

Moving to the contractor option, we found that contractors are only less costly than the military in 56 cases. Note that in 53 cases we indicated that the contract option is not available. This means that we did not find a CONUS contract on which to base an estimate. There are two possible implications for not having a CONUS contract as a reference point for costing. First, the Navy has never tried or needed a similar contract in CONUS. Or second, the Navy has been unsuccessful getting this type of contract at a price it was willing to pay. Clearly, if the contract price is high enough, the option will be available, but it seems unlikely that such a price would be less costly than military personnel.

Overall, we found that each of the 336 billets had at least one of the four non-military options that were less costly than military personnel.

Upper bound on savings estimates

With this information about relative costs of filling billets from military or non-military, we computed the upper bound on potential savings from military-to-civilian conversions. We did this by converting all billets where the non-military personnel were less costly than the military personnel. Essentially, the following estimates are without regard to feasibility. In other words, if the Navy converted the 141 billets where GS civilians hired in CONUS were less costly than military personnel, it could save \$3.1 million annually as table 9 shows. This is a savings of 17 percent of current costs across the 141

¹¹ GS ADFMs are not an option in one case because the billet is in Diego Garcia, which is an unaccompanied tour.

billets converted or 8 percent across the 336 billets considered for conversion.

Table 9. Potential annual savings from military-to-civilian conversions without regard to feasibility (FY07 dollars)

	Local nationals	GS civilian (ADFM)	GS civilians (CONUS)	Contractors	All options combined
Savings from conversion					
Number of billets	319	329	141	56	336
Military cost of billets (\$K)	\$34,771	\$35,902	\$18,118	\$6,566	\$36,655
Non-military cost of billets (\$K)	\$16,572	\$22,278	\$15,034	\$5,772	\$17,695
Savings (\$K)	\$18,199	\$13,625	\$3,084	\$794	\$18,960
Across converted billets	52.3%	37.9%	17.0%	12.1%	51.7%
Across all 336 billets	49.6%	37.3%	8.4%	2.2%	51.7%

Similarly, if the Navy converted the 329 billets where GS ADFMs were less costly than military personnel, annual savings would be \$13.6 million annually or 38 percent. Annual savings are the greatest, when converting the billets to local nationals (\$18.2 million) and the least when converting to contract labor (\$0.7 million). If the Navy were to convert all of these billets to whichever of the non-military options were the least costly, it would convert all 336 billets for a savings of \$19.0 million annually. Nearly all of the savings come from converting to local nationals when possible or to one of the other non-military options when there is no local national option.

Accounting for feasibility in savings estimates

In some respect, it is very difficult to know exactly what is and isn't feasible until the Navy actually tries to convert OCONUS billets because there isn't much history or experience with this issue. That said, conversion of all billets—as table 9 shows—is clearly not feasible based on our study of the markets and from visiting some of the OCONUS facilities. Accordingly, we begin to add in this section some constraints on conversions to make them more realistic. Granted there are issues other than cost to consider, but here we just consider cost. Decision makers need to consider the other factors before proceeding on conversions based on cost alone.

What is clear from the estimates in the previous section is that in terms of cost, the Navy should convert to a local national if that is a viable option. From our site visits to the various OCONUS MTFs and HROs, it is clear that it will be difficult to rely on local nationals beyond administrative positions. The difficulty arises from the problem of finding local nationals with the right skills who also possess English language proficiency.¹² Additionally, some host country labor agreements may bar large numbers of medical personnel from working in U.S. military hospitals [12, 13, 14] because these types of professionals are needed to meet the health care demands of their own country. Similarly, U.S. requirements that the individual be certified or licensed by one of the 50 states or meet U.S. education and training requirements for certain positions may make filling these positions extremely difficult [15].

In concept, we said that administrative positions are more likely to be convertible to local nationals.¹³ But which positions are administrative positions? Table 10 shows the 336 billets by accounting budget activity group (BAG). For our analysis, we assumed that billets in any BAG other than “IN HOUSE CARE” or “CONSOL HLTH SUP” are administrative positions.¹⁴ These “administrative” BAGs account for 64 billets or 19 percent of the 336 billets under consideration.

¹² The HROs indicated that getting local nationals to fill administrative positions was generally doable. However, the viability of hiring local nationals in patient care settings is largely unknown. There simply isn't a lot of experience recruiting this type of labor from the local national population. The Naples HRO expressed a willingness to try and recruit non-administrative labor, but cautioned about relying on the local national population for this labor until the recruiting viability is known.

¹³ There may be some limitations on converting military health care positions to local nationals in Japan, given the master labor contract with the government of Japan, which has a ceiling on the number of Japanese that the Navy can hire.

¹⁴ We understand and recognize that there may be some (but not many) administrative billets in the in-house care or consolidated health support BAGs. These might be administrative or clinical positions. But for this analysis (and because few are administrative), we assumed that all in these BAGs were clinical positions.

Table 10. OCONUS billets under consideration by BAG

BAG	Enlisted	Officer	Total
BASE OPS/COMMS	44	10	54
CONSOL HLTH SUP	1	6	7
ED & TRAINING-O	4	5	9
FAC SUSTNMNT-CON	0	1	1
IN HOUSE CARE	161	104	265
Total	210	126	336

Source: Director of Medical Resources, Plans, and Policy (N931)

As for GS employees, those who are ADFMs living near the MTF are clearly more cost-effective than hiring GS in CONUS and moving these personnel OCONUS. But the availability of certain skills may be limited or not consistently available over time among the ADFM population near a facility.

Given these factors, we provide a range of cost savings estimates that use more reasonable assumptions about what is feasible. Here we look at feasibility in terms of the occupations that the Navy is unlikely to fill with local nationals or people from the ADFM population. For reference, table 11 shows the distribution of the 336 billets by occupational group.

Table 11. OCONUS billets under consideration by occupation

Occupational group	Billets
Audiologist	9
Budget analyst	1
Dentist	8
Dietician	8
Health system specialist	8
Medical technician	210
Nurse	60
Occupational therapist	7
Physician	13
Psychologist	4
Social worker	8
Total	336

Source: Director of Medical Resources, Plans, and Policy (N931)

The first feasibility assumption that we make is to assume that the Navy will not be able to find physicians, dentists, psychologists, and audiologists it can hire among the local national population. To be clear, it is probable that commands could find one or two on occasion, but it is unlikely that they could find a sufficient number of these on a continuing basis to meet the requirement consistently. This change reduces the number of positions that could be filled by local nationals from 319 to 286.

The second assumption that we make is to assume that, given the demographics of the ADFM population, it is unlikely that the Navy would be able to fill GS-12 or above positions considering the expected skill set of the ADFM population near OCONUS facilities. That is not to say that such skills don't exist in this population, but that they are unlikely to be in sufficient number and consistency over time to count on them to fill converted billets on a continuing basis. This feasibility assumption means we assume that the Navy will not be able to find physicians, dentists, psychologists, audiologists, and health system specialists among the ADFM population.

Table 12 shows how table 9 changes as a result of these feasibility assumptions. Overall potential savings from military-to-civilian conversions fall from \$19.0 million to \$16.5 million annually.

Table 12. Potential annual savings from military-to-civilian conversions excluding higher level occupations (figures in FY07 dollars)^a

	Local nationals	GS civilian (ADFM)	GS civilians (CONUS)	Contractors	All options combined
Savings from conversion					
Number of billets	286	290	141	56	308
Military cost of billets (\$K)	\$29,728	\$29,989	\$18,118	\$6,566	\$36,655
Non-military cost of billets (\$K)	\$14,081	\$17,480	\$15,034	\$5,772	\$20,175
Savings (\$K)	\$15,647	\$12,509	\$3,084	\$794	\$16,480
Across converted billets	52.6%	41.7%	17.0%	12.1%	45.0%
Across all 336 billets	42.7%	34.1%	8.4%	2.2%	45.0%

a. For local nationals, we exclude physicians, dentists, psychologists, and audiologists from consideration, and for GS ADFMs, we exclude physicians, dentists, psychologists, audiologists, and health systems specialists.

In addition to these feasibility assumptions, we estimated savings under three scenarios involving different degrees of feasibility:

- **Scenario 1**—Convert administrative positions to the least costly option, and convert all other positions to the least costly option (excluding local nationals).
- **Scenario 2**—Convert administrative positions to the least costly option, and convert all other positions to GS civilians hired from CONUS to work OCONUS.
- **Scenario 3**—Convert administrative positions to the least costly option with no other conversions.

The assumptions on these three scenarios are increasingly restrictive. Based on our discussions during the site visits (which highlighted the issues of availability of qualified labor in reliable quantities), we concluded that conversions are generally possible for administrative positions because these skills are found in the local national and ADFM populations in relatively sufficient numbers. Beyond the administrative positions, however, conversions become harder, particularly among the local national population where differences between host nation and U.S. education and training standards occur. Consequently, for scenario 1, we assumed that administrative positions could be converted to any personnel type (whichever is the least costly) and that all other positions could be converted to any personnel type except local nationals.

Scenario 2, like scenario 1, allows administrative positions to be filled by any personnel type, but it is more restrictive in how it fills all other positions, which we limit to GS civilians hired from CONUS. The reasoning is that you would like to hire GS ADFMs (because they are generally the cheapest after local nationals), but we can't be certain that the ADFM population will have the right skills, in sufficient quantity, and consistently over time. So to be conservative, we estimate savings using GS civilians hired from CONUS.

Scenario 3 is the most restrictive of the three in that it only assumes conversion of the administrative positions. The reasoning here is that the Navy can't assume that it could get local nationals or GS

ADFM for the reasons discussed in the first two scenarios. Additionally, it further assumes that you can't get GS civilians hired from CONUS in sufficient numbers to fill all of the conversions. We expect that this would be particularly true for enlisted billets because we expect that people in lower-level occupations would typically be less willing to move OCONUS. This scenario also recognizes that the Navy may have substantial time periods between the time a GS civilian leaves and the time he or she can be replaced with a GS hire from CONUS. These lags may make these types of hires impractical from a business operations standpoint.

We summarized our results for these three scenarios in table 13. For scenario 1, we estimate that the Navy could convert 304 of the 336 billets for an annual savings of \$13.7 million or 37 percent of the current costs. Annual savings for scenario 2 are \$6.1 million resulting from 169 conversions. The savings decrease between scenarios 1 and 2 shows how much more costly it is to hire GS civilians from CONUS rather than the ADFM population because the number of billets converted dropped by about 45 percent. Finally, annual savings from converting just the 64 administrative positions are \$3.7 million. Given all the unknowns about the conversion process overseas, we won't know for certain what conversions are really feasible. Hence, it is difficult to know which of our three scenarios most closely models reality. But based on our site visits and discussions with the commands, the truth probably lies somewhere between scenarios 2 and 3.

Table 13. Potential annual savings from military-to-civilian conversion by scenario

Scenario	Billets considered	Converted billets	Military cost of billets (\$K)	Savings (\$K)	Percent savings
Scenario 1: Convert admin positions to the least costly option, and convert all other positions to the least costly option (excluding LN).	336	304	\$36,655	\$13,666	37.3%
Scenario 2: Convert admin positions to the least costly option, and convert all other positions to GS hired from CONUS.	336	169	\$36,655	\$6,081	16.6%
Scenario 3: Convert admin positions to the least costly option with no other conversions.	64	64	\$36,655	\$3,661	10.0%

Billets remaining after conversions

To this point in the discussion of potential savings from military-to-civilian conversions, we focused on the 336 billets under consideration. In this section, we put the conversions in context of the total OCONUS military billets to show what percent of military billets would be converted. Table 14 shows that there are 3,518¹⁵ military billets across OCONUS locations before any conversions.

Under scenario 1, we estimated that 304 billets could be converted. Overall, this is an 8.6 percent reduction. Of the 304 conversions, 64 were in administrative type positions, which is a 15.9 percent decrease in administrative billets. For scenario 2, which was more restrictive in the options to convert patient care billets, we estimated that 169 billets could be converted for an overall decrease of 4.8 percent. Again, administrative billets would still decrease by 15.9 percent because the additional restrictions on conversion applied only to billets in patient care settings. Scenario 3 restricted conversions to administrative billets, and the 64 administrative billets converted represented a 1.8 percent overall reduction.

¹⁵ These billets exclude billets that will be eliminated or moved in CONUS.

Table 14. OCONUS active duty Navy billets before and after conversions by scenario

Location and labor type	Billets prior to conversions	Navy billets remaining after military-to-civilian conversions					
		Scenario 1	% change	Scenario 2	% change	Scenario 3	% change
Yokosuka	858	781	-9.0%	809	-5.7%	846	-1.4%
Admin	90	78	-13.3%	78	-13.3%	78	-13.3%
Clinical	768	703	-8.5%	731	-4.8%	768	-----
Okinawa	863	783	-9.3%	827	-4.2%	846	-2.0%
Admin	80	63	-21.3%	63	-21.3%	63	-21.3%
Clinical	783	720	-8.0%	764	-2.4%	783	-----
Naples	433	351	-18.9%	389	-10.2%	410	-5.3%
Admin	49	26	-46.9%	26	-46.9%	26	-46.9%
Clinical	384	325	-15.4%	363	-5.5%	384	-----
Sigonella	344	314	-8.7%	332	-3.5%	336	-2.3%
Admin	44	36	-18.2%	36	-18.2%	36	-18.2%
Clinical	300	278	-7.3%	296	-1.3%	300	-----
Rota	292	272	-6.8%	279	-4.5%	289	-1.0%
Admin	33	30	-9.1%	30	-9.1%	30	-9.1%
Clinical	259	242	-6.6%	249	-3.9%	259	-----
Guam	540	527	-2.4%	527	-2.4%	540	-----
Admin	73	73		73		73	-----
Clinical	467	454	-2.8%	454	-2.8%	467	-----
Cuba	188	186	-1.1%	186	-1.1%	187	-0.5%
Admin	33	32	-3.0%	32	-3.0%	32	-3.0%
Clinical	155	154	-0.6%	154	-0.6%	155	-----
Total	<u>3,518</u>	<u>3,214</u>	<u>-8.6%</u>	<u>3,349</u>	<u>-4.8%</u>	<u>3,454</u>	<u>-1.8%</u>
Admin	402	338	-15.9%	338	-15.9%	338	-15.9%
Clinical	3,116	2,876	-7.7%	3,011	-3.4%	3,116	-----

Note that the reductions in percentage terms are not proportionally the same across locations. The smallest reductions in any of the scenarios are for Guam and Cuba. The next smallest reductions in percentage terms are in Rota, Sigonella, Okinawa, and Yokosuka. Naples has the largest reductions of any location in any scenario.

For example, in scenario 1, Naples would take an 18.9 percent reduction compared to the next highest of 9.3 percent in Okinawa. The reductions in Naples are particularly large (relative to the other

locations) for administrative positions. Specifically, Naples would take a 46.9 percent reduction compared to the next highest of 21.3 percent in Okinawa.

FTE differences across labor types

The savings estimates that the previous sections show assume that non-military personnel will replace military personnel on a one-for-one basis. That, however, may not be the case. To look at this issue, we computed the non-military FTEs that would be necessary to replace the equivalent of one military FTE.

Note that the enlisted and officer FTEs are fewer than the number of bodies by about 14 percent for enlisted and 8 percent for officers if we account for readiness and military-specific activities that civilians or local nationals would not have to perform [16, 17, 18]. At the same time, collateral duties performed by military personnel cannot be expected of civilians, contractors, or local nationals. Based on Medical Expense and Performance Reporting System (MEPRS) data, we estimate that military FTEs (including readiness-related activities and collateral duties) are 11 percent more than bodies for enlisted and 7 percent more for officers.¹⁶ Similarly, we find in the MEPRS data that the civilian FTEs relative to bodies are about 8 percent fewer. As for local nationals, we assumed that they would be the same as GS civilian with an adjustment for Europe. The workweek in Europe is 36 hours compared to a 40-hour week typical in the U.S. To account for this difference, European local nationals are given “rest days” to compensate them for the fact that they are working a 40-hour week.

Combining all of these factors (some of which reduce and some of which increase military FTEs relative to civilians and local nationals), we compute a military FTE as well as the number of GS civilians or local nationals that would be necessary to replace a military FTE. Table 15 shows these estimates. Given all of these factors, we find

¹⁶ Representative lists of the collateral duties and watch bill assignments are contained in tables 39 and 40 of Appendix A; the lists demonstrate the demands placed on active duty personnel in excess of a normal 40-hour work week and their primary health care occupation.

that it takes between 1.03 and 1.23 local nationals to replace 1 military FTE, depending on location and whether it is an enlisted or officer position. Similarly, the civilian figures are between 1.03 and 1.07 FTEs. Although, these figures are above 1, we did not account for them in our savings estimates in table 13.

Table 15. FTEs needed to replace 1 Navy (military) FTE

	Compared to enlisted		Compared to officers	
	GS civilians	Local nationals	GS civilians	Local nationals
Europe	1.03	1.18	1.07	1.23
Japan	1.03	1.03	1.07	1.07

Table 16 shows how the savings estimates for the three scenarios (shown in table 13) would change if we account for these FTE estimates. Accounting for FTE differences lowers cost savings but not dramatically. Specifically, the savings estimates for scenario 2 fall from \$6.1 to \$5.7 million annually. Similarly, the annual savings estimate falls from \$3.7 to \$3.3 million for scenario 3.

Table 16. Potential annual savings estimates adjusted for FTE differences

Scenario	Billets considered	Converted billets	Military cost of billets (\$K)	Savings (\$K)	Percent savings
Scenario 1: Convert admin positions to the least costly option, and convert all other positions to the least costly option (excluding LN).	336	303	\$36,655	\$12,599	34.4%
Scenario 2: Convert admin positions to the least costly option, and convert all other positions to GS hired from CONUS.	336	157	\$36,655	\$5,688	15.5%
Scenario 3: Convert admin positions to the least costly option with no other conversions.	64	64	\$36,655	\$3,298	9.0%

Training costs for military personnel

The military provides substantial professional and technical education and training (in-house or through civilian programs) for its officers and enlisted personnel. Previous CNA research shows that these costs can be considerable for all medical department commu-

nities, both officers and enlisted [19]. For example, it costs about \$20,000 to train a general duty corpsman, and if he/she receives specialized technician training, it costs an additional \$7,000 to \$42,000 depending on the Navy Enlisted Classification (NEC) [20].¹⁷ The military typically spends between \$0.2 and \$1.5 million to train physicans, depending on their specialty and how they were accessed into the military [21]. To account for the full long-run costs of military personnel, we must include the amortized training costs in our estimates.

The potential savings estimates in table 13 do not account for the amortized training costs for military personnel. Table 17 shows how these potential savings estimates would change when we account for the training costs. Potential savings for scenario 3 increase from \$3.7 to \$4.7 million annually. Similarly, potential annual savings increase from \$6.1 to \$11.0 million for scenario 2.

Table 17. Potential annual savings estimates adjusted for training costs

Scenario	Billets considered	Converted billets	Military cost of billets (\$K)	Savings (\$K)	Percent savings
Scenario 1: Convert admin positions to the least costly option, and convert all other positions to the least costly option (excluding LN).	336	329	\$43,676	\$19,797	45.3%
Scenario 2: Convert admin positions to the least costly option, and convert all other positions to GS hired from CONUS.	336	280	\$43,676	\$10,990	25.2%
Scenario 3: Convert admin positions to the least costly option with no other conversions.	64	64	\$43,676	\$4,682	10.7%

The potential savings estimates increased for two reasons. First, potential savings increased for each billet converted when training costs weren't considered. This is evident in scenario 3. Here the

¹⁷ These figures are in 2002 dollars.

same 64 billets are converted under either assumption, but when training costs are considered, each conversion is more cost-effective.

Second, the inclusion of training costs tips the scales for some billets so that non-military personnel options are now more cost-effective than military personnel. This is evident in scenario 2. Here the number of billets converted increased from 169 to 280. That combined with the increased cost-effectiveness of each conversion increased the potential cost savings to \$11.0 million.

In the long run, the figures listed in table 17 are the most accurate estimates of potential savings from conversions. Again, we emphasize the feasibility issue, which may mean that it is not practical to convert many of the 336 billets.

In the near term, however, we think our figures in table 13 are the most useful for N931 and the QDR process. Why? Because it would be extremely difficult for Navy Medicine quickly “turn off” the current training and education programs (and the bodies that are filtering through them). This is because if part of the reason for conversions is to free up resources to pay other bills, stopping or scaling back training programs would defeat the purpose. It would take DOD several years to realize such savings, most likely beyond the window of FY13. Consequently, the estimates that show the amount of savings without training costs more accurately represent savings that DOD would realize in the near-term and that it could use to pay other bills. Furthermore, the additional 111 billets (280 versus 169) that could be converted in scenario 2—when we account for training costs—would actually increase near-term costs because it was the inclusion of the training costs that tipped the scales to make military-to-civilian conversions cost-effective. Such conversions would thwart or negate the purpose of using conversion savings to pay near-term bills.

Notional look at feasibility

Unknowns remain regarding conversions, such as what occupational skills exist in the ADFM population, in what numbers, and whether these numbers are consistent enough over time for the Navy to rely on them to fill converted billets. If sufficient numbers

exist among this population, it can be a cost-effective way to fill converted billets. Site visits and talking to the commands indicate that there are ADFMs with skills that the medical facilities need and that they are hired on occasion. In this section, we look at whether these hires are serendipity or are something that the commands can depend upon consistently over time. If they cannot be relied on consistently over time, converting military billets with the expectation of a GS ADFM hire would be risky.

We explored this question by looking at the percentage of the U.S. population that is employed and the percentage of the employed population in specific occupations. Applying these figures to the ADFM population of the various locations gives you an expected number of people in a population with certain skills. But note that this expectation does not tell you how consistent these figures will be over time.

To answer the consistency question, we randomly generated populations equal in size to the size of the potential ADFM labor force. To do this, we extracted from DEERS the ADFM population between 18 and 64 years old, which we show in table 18.¹⁸ These population figures vary by location with Okinawa the highest at 9,745 and Diego Garcia the lowest with none (because it is an unaccompanied tour). For illustration purposes, we used the Sigonella results because that location's ADFM population is the median size of these OCONUS locations.

¹⁸ What we have labeled the ADFM population includes beneficiaries who are retirees (and their dependents). It also includes those beneficiaries enrolled in nearby sites—sites that are close enough to work at the Navy facility.

Table 18. ADFM population (18-64)

Location	Population
Okinawa	9,745
Yokosuka	9,739
Misawa	5,652
Guam	4,755
Naples	4,223
Atsugi	2,789
Sigonella	2,778
Sasebo	2,732
Rota	2,200
Iwakuni	1,861
Cuba	576
Bahrain	196
Diego Garcia	0

We applied the average percentage of the 18 to 64 U.S. population with employment, which is 80.2 percent based on the Current Population Survey (CPS) to find the potential labor force.¹⁹ For Sigonella, this means a potential labor force of 2,228. We derived from the CPS the percent of people in various occupations. We chose six occupations for this illustration (see table 19).

Table 19. Notional simulated availability of occupation skills in ADFM population – Sigonella

Occupation	% of population in occupation	Based on U.S. employment rate			Based on 30% of 18-64 ADFM population		
		Avg (SD) ^a	Min	Max	Avg (SD)	Min	Max
Registered nurses	1.71%	35.7 (6.4)	22	50	13.5 (3.6)	8	23
Licensed practical nurses	0.37%	8.2 (2.8)	3	14	3.1 (1.5)	0	6
Clinical laboratory techs	0.23%	5.2 (2.5)	1	10	2.2 (1.5)	0	6
Diagnostic related techs	0.19%	4.0 (2.3)	0	8	1.7 (1.5)	0	5
Dietitians and nutritionists	0.04%	0.8 (0.9)	0	3	0.2 (0.4)	0	1
Audiologists	0.02%	0.4 (0.6)	0	2	0.1 (0.3)	0	1

a. SD or standard deviation is a measure of the variability of the population mean across the 30 random samples.

¹⁹ We derived these figures from the 2005 Current Population Survey conducted by the Bureau of Labor Statistics.

These are RNs, LPNs, clinical laboratory technologists and technicians, diagnostic related technologists and technicians, dietitians and nutritionists, and audiologists. CPS data indicate that 1.71 percent of those listing an occupation are RNs compared to only 0.02 percent for audiologists. Table 19 shows the percentages of people within these six occupations.

Given a potential labor force of 2,228 in Sigonella, we randomly generated populations of this size and with these occupational characteristics and then looked at how many people were in these populations in these six occupational groups. In total we generated 30 random populations. We found that, on average, we expect to find 35.7 people in the ADFM population who are RNs. But, note that there is considerable variability; for example, one population had only 22 RNs. Similarly, on average there were four diagnostic related technologists and technicians in these populations. Here again variability is important because, for one of the populations, there were none in this occupation and in four of the samples, there was only one. Essentially, the variability is a measure of risk.

Furthermore, the variability as measured by the standard deviation shows that the smaller the ADFM population or the smaller the percent of people in an occupation, the higher the variability (relative to the mean) we expect to find in our populations; in other words, the riskier it is to rely on ADFM population as a source of filling converted billets.

We again emphasize that this illustration is notional and relies on several assumptions, which may not completely match reality. What do we mean? First, the assumption that the potential labor force of the ADFM population age 18 to 64 equals the average in the U.S. of 80.2 percent is likely an overestimate. Clearly the average age of the ADFM population is much younger than the general 18 to 64 populations and with a higher percentage of females. Given that labor force participation varies systematically by age and gender, there will be differences. Generally, we expect that these differences mean that the potential labor force of the ADFM population will be less than the 80.2 percent that we estimated. Additionally, being OCONUS may cause reductions in labor force participation because of family constraints and the desire to be free to enjoy the travel opportunities that come from such tours. Given these factors, table

19 also shows the expected number of people in the potential labor force of the ADFM population in certain occupations if the labor force participation rate were 30 percent of the population. For Sigonella, this means a potential labor force of 833. This assumption is consistent with the Navy spouse survey that showed that 70 percent of spouses overseas are not employed by choice [2].

Second, the assumption that the ADFM population will have the same occupation mix as the U.S. population may not be accurate. Certain occupations are driven by education. Hence, to the degree that the ADFM population is more or less educated than the U.S. population, occupation rates vary. Similarly, occupation rates vary by age and gender as well.

Finally, we note that the MTFs are not the only commands looking for labor. To the degree that commands are after the same skill set, the prevalence of that skill set in the ADFM population needs to be compared to its demand from all commands. For clinical skill sets, the MTF is likely the only command looking for this type of labor. However, this would not be true for administrative positions such as budget analysts.

Eliminate the OCONUS billet without replacement

Because this study is not intended to be an efficiency review to define requirements, we did not consider opportunities or costs to eliminate billets. However, we did conduct a comparative analysis between the workload and resources required to meet demand within CONUS MTFs, compared to OCONUS activities to identify potential efficiencies. We also reviewed facility closures, command initiated business transformation plans (where available), and product lines or specialties selected for system-wide civilian conversions to understand how the existing OCONUS resources are being used.

The aggregated data for FY06 in table 20 suggest that, although total costs per encounter OCONUS are higher than in like-sized facilities within CONUS, there are fewer assigned full-time equivalent (FTE) employees performing the work. This is true for all Services, except the Army. These findings suggest that the cause for higher

costs is actual cost of facilities and salaries rather than overstaffing, relative to CONUS facilities.

Table 20. Average number of FTEs and expenses by inpatient facility category (FY 2006)

Data	Large CONUS	Large OCONUS	Small CONUS	Small OCONUS
Average Inpatient expenses bed day	\$2,658	\$2,800	\$3,331	\$3,828
Average of bed days to inpatient FTE	12.5	11.8	7.2	5.5
Average outpatient expense	\$226	\$268	\$245	\$362
Average # of Clinical FTEs	1,213	1,196	628	543
Average # of RN FTEs	1,440	1,220	673	433
Average # of Admin FTEs	4,324	3,472	2,306	1,431
Average # of Other Clinical FTEs	1,082	1,196	612	543
Average # of Paraprofessional FTEs	5,657	5,939	3,290	2,206

Source: TRICARE Management Activity, Expense Assignment System (EAS IV)

The TRICARE Management Activity (TMA) Medical Expense and Personnel Reporting System (MEPRS) Program Office also concluded that OCONUS activities were more expensive than CONUS activities, when using FY04 and FY05 data [22]. Models of historical workload and staffing suggest there may be potential marginal efficiencies. However, the Navy Bureau of Medicine & Surgery (BUMED) previously identified a portion of these efficiencies and subsequently eliminated some of OCONUS billets at MTFs being reviewed in this study.

Although beyond the scope of this research, we think further analysis is required to assess the correlation between current OCONUS workload and resources allocated. This analysis could provide a foundation for better aligning existing OCONUS active duty medical department billets with requirements. Potentially, there are active duty specialists assigned overseas who are being under-utilized because the demand (workload) for their skills is not routinely required, resulting in a degradation of their clinical skills and less than optimal use of scarce resources. Also, the feasibility of regionalizing some overseas health care services (e.g., planning, budget and information systems) and reducing the scope of services at selected locations (i.e., inpatient versus outpatient status) that are consistent

with mission effectiveness should be assessed to see whether additional efficiencies exist.

Summary and conclusions

In looking at cost alone without regard to other factors, we found that local nationals and GS civilians hired from the ADFM population were generally the most cost-effective conversion options. GS civilians hired in CONUS to work OCONUS or contract personnel were not as cost-effective as local nationals and GS ADFMs, often by a substantial margin. This finding is not surprising given the allowances incentives the military pays to get civilians and contractors to work OCONUS.

Although local nationals and GS ADFMs are desirable from a cost perspective, it is not feasible to rely on them for conversions for billets in patient care settings for two major reasons. First, it may be difficult to find local nationals whose skills in patient care settings meet U.S. training standards and requirements, and who are proficient in the English language. Second, the ADFM population may not consistently have the skills that the MTFs need. This is particularly true with a smaller ADFM population and for small occupations. Given these factors, estimating conversion savings using GS ADFMs or local nationals for patient care billets would give an overestimate of cost savings. This would occur because when a command cannot get the local national or GS ADFM that saving estimates were based on, the command must get a GS hire from CONUS or a contractor at a higher cost. Accordingly, savings estimated for conversions of billets in the patient care setting are more accurate when using a GS hire from CONUS or contract labor.

Given all of the cost and feasibility factors discussed in this section, we conclude that 64 administrative positions could be converted for an annual savings of \$3.7 million. Additionally, if the Navy wanted to be more aggressive and try and convert some billets in patient care settings using GS hired from CONUS, it could convert 105 billets (in addition to the 64 administrative positions) for annual savings of \$6.1 million. We emphasize that conversion of a significant number of OCONUS clinical billets has never been tried, so there is no experience to base the success of such conversions on.

That said, given the problems of consistent availability of the right skills in the ADFM population, hiring lags, and the absence of a solid PPN as a back-up system, such clinical conversions seem risky. Finally, we note that these savings estimates are based on cost and feasibility factors alone and not on any other factor that may favor or oppose conversions.

We are now ready to turn our attention to better understanding the health care systems and labor markets in each of the nations we are evaluating.

Host nations

As we just discussed in the previous section, there are some potential cost savings associated with military-to-civilian billet conversions. However, these cost options must be placed into context of how feasible it is to reliably attain qualified substitutes for the active duty health care professionals currently providing clinical services overseas. Moreover, it is important to understand the health care delivery system within the respective host nation where the Navy has MTFs because any large number of military-to-civilian billet conversions will make the military more reliant on that network for medical care. Our discussions and site visits to the various OCONUS MTFs and civilian hospitals in those areas revealed that a major part of the decision to convert military billets to other types of labor options is about *managing the expectations* of active duty forces and their family members who are stationed in these locales. A vital part of Navy and family readiness hinges on the ability of the medical department to provide (or orchestrate) top quality health care, regardless of where the Sailors or Marines (and their families) are stationed. We provide an overview of the international labor market and health care systems in the nations in which the Navy OCONUS MTFs are located.

International health systems

The United States is the only industrialized nation without a nationalized health insurance program. All other nations of concern to this study have publicly provided health insurance financed through general taxation. All industrialized nations face a major challenge of financing their health care systems and managing the demand for health care workers as the working age population declines in number and the general population ages. This graying of the population means an increased demand for health care services in general, and for services related to chronic disease in particular.

The global nursing shortage is well documented by the World Health Organization (WHO), the Organization for Economic Co-ordination and Development (OECD), the European Federation of Nurses Association and other authoritative bodies. Data in table 21 suggest that Italy has fewer nurses per 1,000 population than any of the nations under consideration in this study, but has more practicing physicians. None of the nations other than the United States have more than one dentist per 1,000 population. There were no data available on average compensation for any of these specialties.

Table 21. Density of selected practicing health care professionals, by nation

Country	Physicians		Nurses		Dentists		Pharmacists	
	Density per 1000	Year	Density per 1000	Year	Density per 1000	Year	Density per 1000	Year
Italy	4.2	2004	5.4	2003	1.1	2004	1.1	2003
Japan	2	2004	7.8	2003	0.71	2002	1.2	2002
Spain	3.4	2004	7.5	2003	0.49	2003	0.87	2003
USA	2.4	2004	7.9	2003	1.8	2000	0.88	2000

Source: The World Health Report 2006

As the data in table 22 show, in 2001, the World Health Organization ranked both Italy and Spain higher than the United States on overall performance of their health care systems [23]. The overall performance ranking reflects a relative efficiency of how well a nation did in translating expenditures into positive health care outcomes, given health spending and educational attainment. Since the United States is among the highest in per capita health care expenditures and has some of the lowest aggregate population health outcome measures, it was ranked as the least effective system. The responsiveness indicator was a measure of how well the nation did in meeting the population's expectations for autonomy, dignity, confidentiality (grouped into a category of "respect of persons"), prompt attention, quality of basic amenities, access to social support networks, and choice of care provider. As suggested in this survey, the United States ranks at the top of the responsiveness ranking. This benchmark is reflective of U.S. citizens' expectations regarding "responsiveness" of the health care system.

Table 22. Citizens' satisfaction with their health care systems relative to World Health Organization rankings from 17 nations

Country	Percent satisfied with the system	Ranking by citizen satisfaction	Overall WHO ranking of system performance	Responsiveness ranking
Denmark	90	1	16	3
Finland	78	2	15	11
Austria	73	3	7	8
France	69	4	3	9
Luxembourg	69	5	2	2
Netherlands	68	6	5	6
United Kingdom	67	7	6	14
Ireland	65	8	16	13
Sweden	56	9	1	7
Belgium	54	10	9	9
Germany	52	11	10	4
Spain	43	12	3	15
USA	40	13	17	1
Canada	40	14	4	5
Italy	20	15	2	12
Portugal	20	16	17	17
Greece	18	17	15	16

Source: The World Health Report 2006

Italy

Overview

Italy's National Health Service (NHS) was established in 1978. By broadly defined international measures of effectiveness, the Italian health service appears to be relatively effective in managing the health care needs of its population. Like the United States, financing of health care systems, availability of resources, and utilization of health care services vary greatly among the regions. According to a 2001 World Health Organization report, long waiting lists, high co-payments, and unsatisfactory quality of services (especially in central or southern regions) have created a demand for care outside the NHS [24]. In fact, private sources (including private health insurance) of health-related financing accounted for 33 percent of total health care expenditure in 1999.

Hospitals

Hospital care is delivered mainly by public structures, represented by 842 public hospitals (61 percent of all hospitals). Local health units also contract out services to 539 private hospitals. Italy reports fewer acute beds than the OECD average (3.7 per 1000 population, compared to the OECD average of 4.1 beds). Specialized ambulatory services, including visits and diagnostic and curative activities, are provided either by local health units or by accredited public and private facilities with which local health units have agreements and contracts. Similar to the United States, primary care specialists serve as the gatekeepers to specialty care. Once the general practitioner has authorized the visit or the procedure, people are free to choose their provider among any specialist accredited by the NHS.

Physicians

In 2004, Italy had 4.2 practicing physicians per 1,000 population, above the OECD average of 3.0 per 1,000 population [25]. Physicians have three different stages in higher education: university education, postgraduate education, and continuing education. Undergraduate programs last 6 years, during or after which students must work within a hospital ward for at least 6 months. After their university training, medical school graduates must take a state examination to be put on a register to be allowed to practice as physicians. They can then choose among various professional paths depending on the kind of postgraduate specialization program they attend. Future general practitioners and future hospital physicians have two different career paths. Physicians who want to become general practitioners must complete a 2-year general practitioner course and register on a national list. Ranking on the list depends on the number of educational and academic qualifications achieved. [24].²⁰

Primary care providers (including pediatricians) are paid on a capitation basis, and hospital physicians earn a monthly salary. Payment levels and the duties and responsibilities of general practitioners are

²⁰ Certificates issued by other EU Member States to practice as a general practitioner receive reciprocity and are valid for practicing in Italy.

established every 3 years in a collective agreement between the central government and the general practitioners' trade unions. The agreement also fixes the maximum number of patients each physician can have on his or her list. Full-time general practitioners and pediatricians can have up to 1,500 and 800 patients, respectively. Limits for part-time physicians are 500 and 400. When a general practitioner or pediatrician devotes more than 5 hours a week to private practice, the maximum number of patients is reduced proportionately 37.5 patients for each additional hour in private practice above the 5 hours per week.

Hospital physicians are grouped into two levels. Newly employed physicians start as first-level physicians. The medical officer in charge of the hospital unit defines support and cooperation duties for first-level physicians. Second-level physicians usually have managerial roles within the hospital unit to include selection of the most appropriate therapeutic, diagnostic, and preventative treatments for patients. Hospital physicians are paid a salary by the hospital.

Nurses

Nurses in Italy do not constitute a separate professional category. They are representing the higher level of a wider hierarchical structure of non-medical NHS employees that includes technicians, clerks, caretakers, and administrative staff [24]. The organizational structures of non-medical NHS workers are organized into one of four levels, which are categorized by varying requirements of skills, duties, and training:

- Group A – First level employees with simple duties; this level generally includes auxiliary workers and caretakers.
- Group B – Includes more skilled workers, such as assistant technicians and administrative staff with little responsibility.
- Group C – Comprises mainly nurses (includes midwives), dietitians, and technicians working in such areas as radiology, orthopedics, and ophthalmology, as well as higher-level administrative staff.
- Group D – Possesses the same skills as Group C, but in addition to specific professional duties, they also have decision-

making responsibility and play a significant role in organizing the delivery of health care.

Non-medical employees in the NHS receive a basic wage and productivity rewards. The level in the hierarchal structure, taking into account duties, responsibilities, and training profile, determines the basic wage. Productivity rewards are part of the more general incentive scheme that ties a portion of the wage to the results achieved by the employee. In particular, results are measured both at the individual level and in health care centers, with rewards going to employees who successfully improve the quality of their performance and contribute to increasing the overall productivity and performance of the health care unit as measured by the supervising second-level physician.

Nurse training is similar to United States diploma degree programs, requiring completion of a 3-year university program and a state qualifying exam. Nurses can attend post-graduate programs in pediatrics, geriatrics, psychiatry, or public health care. In addition there are curriculums designed for nurse managers and educators. Italy is well below the OECD average number of nurses with 5.4 qualified nurses per 1,000 population in Italy compared to the OECD average of f 8.3 per 1,000 population [25]. Like other industrialized countries, Italy has a nursing shortage.

Pharmacies

Italian policy permits both private and public pharmacies to co-exist. Pharmacists who act as independent contractors under the NHS own private pharmacies. Pharmacists employed by the municipality manage public pharmacies, mainly in the same region in which the pharmacy is located. Despite this administrative division, both types of pharmacies are licensed to sell commercial products and, on behalf of the local health unit, pharmaceuticals. All revenue goes directly to the pharmacist if the pharmacy is private, and to the municipality if the pharmacy is municipal, which then pays a salary to the pharmacist running the pharmacy. The pharmacy's revenue is a percentage, set by law [24].

Spain

Overview

The National Health System is mostly publicly owned and managed, and although governance has been decentralized to the regions, only 7 of the 17 Autonomous Communities have assumed full responsibility. The National Health Institute – or INSALUD – manages most health services in the remaining regions [26]. Within the regions are health areas, which are the basic structures of the health system that provide primary care, specialized ambulatory care, and hospital care. The regions organize health care locally. The system is financed by taxes with an almost universal coverage for its citizens. Total expenditure on health care accounted for 7.4 percent of GDP in 1997, about 75 percent of the EU average [27].

Within the central government, both the Ministry of Health and the Ministry of Labor and Social Affairs have responsibilities for the provision and funding of health services. The Ministry of Labor and Social Affairs defines benefits and authorizes payments. The Ministry of Health is responsible for a number of activities, including the coordination of public health and health care services, drafting policy and legislation, regulating post-graduate training for doctors, forming pharmaceutical policy, and standardizing medical and health products [27]. The insurance companies' role is increasing within the health system because 10 percent of the population is covered through private insurance; also, civil servants have access to three publicly funded mutual funds and are free to choose among public or private providers. Private non-profits provide between 15 and 20 percent of hospital care.

Hospitals

Most hospitals are publicly owned and provide mostly acute care, emergency care, and basic services in internal medicine, general surgery, orthopedics, obstetrics and gynecology, pediatrics, physiotherapy, radiology, and laboratories. Also, “the system is integrated with a network of outpatient ambulatory centers which deliver minor surgical and diagnostic procedures linked to hospitals” [28]. At the end of 1997, there were 799 public and non-public hospitals, for a total of 166,276 beds or 4.2 beds per 1,000 people. As of 1995,

there were 3.1 acute care beds per 1,000 people, the fourth lowest in the European Union [27].

Physicians

The Ministry of Education is responsible for a 6-year (undergraduate) training program, divided into a 3-year pre-clinical and a 3-year clinical. Medical education is publicly funded. Twenty-six universities offer this 6-year medical degree – Licenciado en Medicina y Cirugia (Licentiate in Medicine and Surgery) – and all are state universities, with the exception of one private school in Catalonia. In the European Union, doctors who qualify to practice in a member state are eligible to practice in other member states. Doctors cannot practice independently until they have obtained at least the 6-year (undergraduate) training degree. Additional training is required to practice as specialists [28].

The Ministry of Education and the Ministry of Health are jointly responsible for advanced (post-graduate) training and planning programs. Post-graduate training can last from 3 to 5 years, depending on the specialty [27]. There are 49 specialties, of which 45 are clinical. Each specialization is governed by a national commission, which defines the content and duration of the training programs [28]. Training must occur in an accredited hospital or other unit, and, as of 2004, there were 227 hospitals and 2,378 units. To obtain accreditation, a public or private center must comply with rigorous standards and be audited by a team of medical inspectors. Facilities must be reaccredited every 3 years [27].

Admission to an advanced (post-graduate training) program is through a competitive entrance examination. The number of institutions available for specialized training is fixed annually and was generally between 4,500 and 5,000 a year during the mid-1990s [27]. More than 47,550 specialists were trained from 1978 to 1996, with more than 25 percent of these specialists in family and community medicine. The number of places in family and community medicine is growing [28]. Spain has had a low number of primary care doctors. In 1997, 76.2 percent of doctors became specialists, which is almost 20 percent higher than the EU average. Spanish human resource policies resulted in the overproduction of doctors in the 1970s and 1980s. The demand for specialists could not ab-

sorb the supply of doctors coming out of medical school, which caused a high unemployment rate among physicians unable to specialize. Doctors are generally salaried whether they are in primary care or specialized care, inpatient care or outpatient care. They are considered permanent civil servants [27].

Nurses

Nurses and physiotherapists are trained at specialist university schools, and their studies last 2 to 3 years. As of 2000, most nursing specialties were in the development phase, although midwifery and mental health have had programs since 1996. The number of places in nursing programs was limited in the late 1990s to about 7,000 a year, in spite of an acute nursing shortage [27]. In 1997, there was a ratio of 1.8 nurses for each physician, almost half the EU average of 3.2. Since the 1980s, the number of nurses increased by only 20 percent, while other health professions experienced rate increases of 186 percent (dentistry) and 126 percent (veterinary science). There is still an acute shortage of dentists, although the 186 percent rate of entry did bring Spain from 22 percent of the European average in 1985 to 64 percent of the average EU level during the 1990s.

Japan

Overview

After World War II, Japan, under U.S. oversight moved its health care system towards the American health insurance-based system. In 1958, Japan enacted a law providing insurance and pension coverage to the whole population. By 1973, the elderly were entitled to free medical care, and in 2000, the Long Term Care Insurance Law was enacted guaranteeing free access to long-term care [29]. The major feature of the Japanese health care system is universal health coverage, which falls into one of the following categories:

- The insurance system for employees and their dependents.
- The insurance system for the self-employed, their dependents, and pensioners [30].

Japanese medical care is financed through a pluralistic social-insurance system, with mandatory enrollment based on employment or residence and premiums proportional to income. The National Fee Schedule “defines the structure of the Japanese medical system” and “lists all procedures and products that can be paid for health insurance and sets their prices” [31]. This fee schedule is revised every 2 years. All providers, regardless of experience or quality, are paid the same amount for the same service. This prevents providers from discriminating among patients according to their insurance coverage. Because “hospitals cannot compete with each other on the basis of price, they try to attract patients by promising higher quality care and greater access to technology” [32]. The Japanese health ministry asserts that the major benefits of their medical care system are the following:

- All citizens have equal access to medical care services.
- A certain quality of medical care is available to all patients at a relatively low cost.
- Patients are free to choose medical institutions [30].

Chief concerns regarding the Japanese health care system reside in patient perceptions of quality [31]. Frequent complaints include long waits, lack of explanation, poor physical facilities, weaknesses in professional standards, inadequate continuing medical education, and a lack of quality control. Most hospitals do not have quality control schemes because “there seems to be an organizational culture in which evaluation and quality assurance have come to be regarded as policing” [30]. Moreover, Arai and Ikegami report that the “development of systematic postgraduate training has been slow” and “although each specialty has established its certification process, only 10 percent of those accredited have gone through formal training; the rest have been exempted from undergoing formal training in recognition of their clinical experience.” These weaknesses may be due to the “success of the fee schedule in containing costs while maintaining access” [30]. This assertion is made based upon the belief that the fee schedule has a tendency towards limiting use of expensive high-technology services and rewarding low-cost procedures. The Japanese seem to have traded higher quality care for lower cost and access for everyone.

Arai and Ikegami claim that the fee-for-service (FFS) system has led to several problems, which include the following:

- Excessive provision of certain services, particularly pharmaceutical services because clinicians are provided financial incentives to over-prescribe expensive drug treatments
- Provider's economic incentive towards volume of care, rather than quality. Arai and Ikegami note that in outpatient care, a doctor may see an average of 49 patients per day.

There are no primary care gatekeepers in Japan; referrals are not required for access to specialty care. This policy has resulted in overcrowding at university and other large hospitals, creating relatively long waiting times and extremely short consultation times. The Japanese Health Ministry reported in 1999 that medical services were improved, both qualitatively and quantitatively, through the establishment of licensing systems for medical professionals, preparation and expansion of educational institutions such as universities, and the implementation of post-graduation training to improve the quality of medical staffs [33].

Hospitals and workforce

Japan has more than 9,000 hospitals, with more than 1.6 million beds. Over 7,000 of these hospitals are private hospitals, approximately 1,000 are owned by local government authorities, 22 are owned by the national government, and 273 are "semi-national" hospitals. More than half of the beds are for acute care, with the other half dedicated to long-term and psychiatric care beds (about 350,000 beds in both categories) [29]. According to Inkegami and Campbell, the national or local governments, voluntary organizations, and universities own most large hospitals. Law prohibits for-profit investor-owned hospitals.

Table 23 presents the number of Japanese health care professionals as of 2002. Because of the aging population and increased specialization of medical services, it is presumed that the demand for health, medical, and welfare services personnel will increase in the future [34]. Approximately one-third of physicians are private prac-

tioners paid on a fee-for-service basis, and the remainder are hospital-based physicians on salary. Private doctors do not have admitting privileges, so they cannot follow their patients to the hospital, but they “earn approximately twice that of specialists employed by hospitals” [35].

Table 23. Number of health care personnel in Japan (2002)

Health workforce	Total	Rate per 1,000 population
Doctors	262,687	2.06
Dentists	92,874	0.73
Pharmacists	229,744	1.8
Nurses	1,097,326	8.6
Midwives	24,340	0.19
Other Nursing and Auxiliary staff	67,376	0.53
Other paramedical staff (Medical Assistants, Lab Technicians, X-ray Technicians)	276,070	2.16
Other health personnel (Health Inspectors, Assistant Sanitarians, Traditional Workers)	8,499	0.01

Source: Japanese Nursing Association Data, 2002

Physicians

Students are permitted to attend medical school immediately after high school if they pass the entrance examination. Medical school in Japan lasts 6 years. In general, Japanese medical students study liberal arts and sciences during the first and second years, basic medical science and basic clinical medical science during the third and fourth, respectively, and clinical medicine during their clinical clerkship in the fifth and sixth years. Japanese medical students then take a single national medical licensure examination, which they must pass in order to move on to residency training [36]. Shortcomings in Japanese medical education include the following [34]:

- “A woeful lack of clinical skills.”
- Absence of any bedside clinical instruction.
- Faculty see “teaching as a burden that detracts and diverts them from their primary goal of academic advancement through research.”

- There is “no recognition of the value of a problem-based approach to teaching clinical medicine, so that clinical problem-solving skills have atrophied to the point of near-extinction” [37].

A 1998 article published in *Academic Medicine* reported that “because postgraduate clinical training programs with defined, comprehensive curricula are rare, and because virtually all clinical training is in inpatient settings, Japanese physicians’ clinical competence tends to be insufficient for providing first-class community-based primary care” [38, 39].

In 2004, the Ministry of Health, Labor and Welfare initiated a requirement that all medical graduates who expect to be clinical physicians must complete a 2-year postgraduate clinical training program in primary care following graduation from medical school. The aim of this national residency program is to ensure that residents have the essential medical competence to perform primary care duties. Residents must rotate through a core program of internal medicine, surgery, pediatrics, obstetrics/gynecology, psychiatry, and community health and medicine.

The U.S. Navy sponsored a medical training externship program at the United States Naval Hospital Okinawa from July 10 to September 1, 2006, and will offer a similar program this summer from June 25 to August 24, 2007, for selected Japanese National Medical Students and Physicians. The program is intended to provide exposure to western style medicine. Each rotation is one week long, and students may select rotations from various medical/surgical specialties including emergency medicine, family medicine, general surgery, internal medicine, obstetrics-gynecology, pediatrics, otolaryngology, orthopedics, and urology [40]. Also, a post-graduate medical internship has been in existence since April 1991 at the United States Naval Hospital Okinawa [41]. The internship program is a yearlong program that runs from April to April and is styled after internship programs in the United States. It is designed to acquaint the interns with American medical practice and working with English-speaking patients. Six Japanese Interns are chosen each year. Following a 3-week orientation, the interns rotate through 12 rotations, which last 4 weeks each. During the first seven rotations, interns will rotate through seven core specialties: emergency medicine, family medi-

cine, general surgery, internal medicine, obstetrics/gynecology, pediatrics, and psychiatry. During the last five rotations, interns are given time to complete elective rotations.

An internship and externship program are also offered at the United States Naval Hospital Yokosuka. The externship program is for Japanese medical students and doctors interested in the internship program. Six programs were planned for summer 2006. The internship is a yearlong program, and interns complete rotations in internal medicine, pediatrics, family medicine, general surgery, obstetrics and gynecology, radiology, orthopedics, anesthesia, dermatology, ophthalmology, otolaryngology, neurology, and psychiatry. Interns may also choose from 6 weeks of electives. Education is conducted in English, and interns learn inpatient and outpatient medicine, focusing on a Western approach to medical care. Interns are paid a salary, and the program provides single interns with housing.

The market for medical education in Japan is poised to become more competitive, for two main reasons. By the end of 2004, all of the 42 public medical schools in the nation were semi-privatized [42]. With less funding from the state, these schools will have to compete for resources to support new initiatives. Another factor, Japan's falling birth rate, means that the competition for students will be fiercer than ever. Today there are about 1.5 million people aged 18 in Japan, but by 2050, due to a steady decline across the population, that number is projected to be cut in half.

Nurses

Nurses must study at an educational institution that provides curriculums for the applicable qualifications as stipulated by law, complete the applicable curriculum, and pass the annual government examinations [34]. After completing senior high school, nurses attend a 4-year bachelor degree course or a 3-year curriculum at a junior nursing college or nursing school. Compared to universities, junior colleges place more emphasis on developing practical skills. Four-year university graduates are entitled to take the government examination for registered nurse, public health nurse, or midwife (provided that the university offers a midwifery course).

- *Public Health Nurses* – licensed to provide basic public health guidance. Training is a minimum of 6 months, but is normally 12 months long, post nursing school.
- *Midwife* – licensed to assist in childbirth or provide antenatal, postnatal, and neonatal care. Training is a minimum of six months, but is normally 12 months long, post nursing school.
- *Registered Nurse* – licensed to engage in providing nursing care to assist in the medical treatment of persons with injuries or illnesses or postnatal women. Training is 3 years long.

Licensed Practical Nurses (LPNs) are licensed from prefecture governors and engage in patient care under instructions from medical doctors, dentists, or registered nurses.²¹ Although this license is prefecture and not national qualification, LPNs can work across prefectures. At the end of 2003, there were 1,268,450 nursing professionals in the workforce, including 45,976 public health nurses, 25,724 midwives, 772,407 registered nurses, and 424,343 licensed practical nurses [43]. “Demands for nursing workers have outpaced the supplies, due to the development of advanced medicine, increase in the number of hospital beds and the aging of patients. Japan is now in the state of chronic nurse shortages in terms of both quality and quantity” [43].

Guam

Guam is a United States territory located roughly 3 hours by air from Tokyo, Japan, and Manila, Philippines, and 7 hours by air from Hawaii. There is no Managed Care Support Contractor (MCSC) network on Guam. The Department of Health and Human Services (DHHS) has categorized Guam as a Health Provider Shortage Area (HPSA) for primary care, mental health, and dental care. Naval Hospital Guam has a support network for selected specialists on Guam, but competes with the demand of the entire civilian population of over 150,000 [44]. The Altarum medical facilities

²¹ Prefectures are similar to U.S. states. These numbers represent all prefectures within Japan, including the remote island of Okinawa. Moreover, similar to the United States, the distribution of the health care workforce may demonstrate regional variations.

master planning study completed in January 2007 noted that their facility resource requirements for the Naval Hospital Guam was based upon “NH Guam’s forward deployed readiness status, the lack of meaningful civilian alternatives, and Guam’s isolated nature” as key factors in their findings [44]. In addition to the Naval Hospital, the Guam Memorial Hospital is the only other inpatient treatment facility located on Guam. This facility is not certified by the Joint Commission on the Accreditation of Health Care Organizations (JCAHO).

Guam’s population health metrics are comparable to those of OECD nations, with an annual growth rate of 1.43 percent; infant mortality of 6.81 deaths out of 1,000 live births; and life expectancy of 78.58 years [45]. As a territory of the United States, Guam follows United States medical guidelines. The Guam Board of Medical Examiners has set standards for practitioners, which are similar to those in California. All doctors must be U.S. trained and board eligible to practice on Guam. As reflected in table 24, the number of providers, other than military, available on the island of Guam is limited.

Table 24. Number of practicing civilian providers on Guam as of November 2006

Provider Type	# on Guam	Provider Type	# on Guam
Anesthesia	6	OB/Gyn	9
Cardiology	1	Ophthalmology	1
Emergency	7	Oral Surgery	1
Endocrine	2	Orthopedics	1
Family Practice	17	ENT	1
General Surg	7	Pathology	3
Hand Surgery	1	Pediatrics	12
Infectious Disease	2	Plastic Surg	1
Internal Medicine	14	Podiatry	3
Mental Health	9	Pulmonary / IM	1
Nephrology / IM	3	Radiology	3
Neurology	3	Urology	1

Source: Naval Hospital Guam

In 2006, total employment in Guam was 62,050 persons, with 15,150 working for the government. The unemployment rate was 6.9 per-

cent in March 2006. In March 2007, the governor of Guam asked that an Executive Interagency Working Group be established to address critical workforce needs. In addition to this, the governor asked for federal grant relief and special visa considerations to attract educators to enhance the current education system. The special visa request also included health care workers. These steps were requested to assist with the preparation of the island's infrastructure for the proposed military buildup in Guam resulting from the movement of III Marine Expeditionary Force from Hawaii and Japan to Guam. This request coincides with a Department of Interior's Office of Insular Affairs report that there were limits in the available labor pool, particularly among professionals [46]. The report asserts that "students graduating from the public school system may be under-prepared for the labor force." This finding was directly related to reports from managers that many in the labor force have inadequate reading and writing skills, which makes it difficult to train individuals for more highly skilled positions. This report suggests that finding qualified health care workers on Guam, even for clerical duties, will be challenging.

We are now ready to look at the opportunities and challenges associated with military-to-civilian billet conversions in OCONUS MTFs.

Opportunities and challenges

We find that both opportunities and challenges present themselves with military-to-civilian billet conversions OCONUS. At this time, the challenges appear to far outweigh the opportunities. Serious limitations to executing conversions from the local nationals market are availability of qualified professionals and the ADP background restrictions. The alternative option of hiring civilians from CONUS (either civil service or contract) is possible, but difficulties with conversions in CONUS suggest that there is also an insufficient U.S. labor market to attract providers, which may require additional incentives that would make them cost-ineffective. In this section we outline both the opportunities and the challenges that policy-makers will most likely face (or should further explore) if they must make the tough decision to convert a large number of OCONUS Navy medical department billets.

Opportunities

Most of the opportunities involved with civilian conversions require changes to current business practices to mitigate the risks involved with large numbers of OCONUS billet conversions. The most obvious opportunity is with expanding the Education and Developmental Intervention Service (EDIS) contract and ultimately transferring the program to the Department of Defense Education Agency (DODEA). Second, movement towards centralizing recruitment and civilian human resource management similar to DODEA could provide greater visibility to costs and a deeper pool of potential employees. Third, ongoing internal reviews of requirements to evaluate business transformation and further regionalization opportunities similar to the efforts undertaken in Europe could ultimately promote locally driven efficiencies. We also think that Navy Medicine needs to more aggressively further explore opportunities to partner and exchange ideas with their Army and Air Force counterparts overseas to leverage their knowledge and lessons learned.

The most far-reaching opportunity requires additional support and resources from the TMA to develop networks overseas and help local MTFs expand existing PPNs. Again, efforts to develop a managed care network overseas will be limited by the demands placed upon the national health systems for labor and services. However, purchased care data suggest there may be some capacity that could be expanded from the local market, albeit limited.²²

Educational and Developmental Intervention Service (EDIS)

Interviews with the BUMED EDIS Program Manager and the EDIS Contract Manager in San Antonio indicated that the EDIS program in Europe is fundamentally all contracted under an Army-initiated contract. This contract support has immigrated to Asia, but is not completely contracted. Asia is still a mix of military, contract, and GS personnel. Use of this contract has resolved the historically high vacancy rates to a large extent. Filling positions with GS employees continues to be difficult. Military members have voiced concerns about career progression. Contractors are reportedly very content in both Japan and Europe. The Navy, Army, and Air Force Surgeons General endorsed a recommendation that this program be transferred to the DODEA. Army's contract representative has suggested that the existing contract with Sterling Medical could be expanded. However, the current contract has no experience with filling the developmental pediatrician requirements, which are needed to diagnosis the child (birth to three) for entry into the program. Current Navy EDIS staffing is provided in table 44 of Appendix A.

The contract is up for renewal, so hard data regarding costs were unavailable. However, the following incentives exist for contractors:

- Any income over \$75,000 is not taxable.
- The government, as part of the contract, pays up to \$30,000 for relocation expenses. (This expense would occur every 3 years as the person moves in and out of the job.)

²²

Please see tables 40 through 43 in Appendix A for additional data.

- Employees receive an education allowance, which varies by geographic location and education level; the allowance ranges from \$16,500 to \$18,300 in Japan but can be as high as \$30,000 in other places. This allowance is not received if the employee chooses to use the DOD schools.
- One professional trip for conference or other skill-retaining training each year is funded by the government contract.
- DOD pays FICA.
- Employees are paid overtime for work in excess of 40 hours per week, including time to travel to see students.
- Employees receive the Living Quarters Allowance (LQA) under the Department of State guidelines for employees overseas. This rate depends upon the classification of the employee, number of dependents, and the area assigned. For general guidance GS-14/15s are in quarter's group 2; GS10/11/12/13s are in quarter's group 3; and GS-1 through 9s are in quarter's group 4. Table 25 provides a breakdown of the LQA by location and classification.
- Turnover for positions is about 25 percent, with reportedly good retention of contract employees. The employees are requested to state their intentions to stay or leave their positions not less than 6 months before contract expiration, which corresponds with the average time that it takes to find a relief for the contract employee. The current contract pays a "loaded rate" that has all the allowances, hourly wages, and contract overhead. Army's contract representative advised that the contract is currently being rebid so actual cost data were not available. However, we were advised that the contract expenditures were about \$6M for an average of 49 employees, or about \$122,500 per FTE. This contract is for therapists and support staff only. There are no physicians under the EDIS contract. Travel costs for travel within theater are paid by the contract and can be rather substantial, particularly in Japan where travel is more extensive and takes longer.

Table 25. Department of State living quarter allowance for employees overseas, by group classification (all figures in thousands of dollars)

Location	Group 2 (LQA in dollars)	Group 3 (LQA in dollars)	Group 4 (LQA in dollars)
Naples	44.1	42.2	37.9
Sicily	27.7	26.2	22.8
Rota	31.2	31.2	27.6
Okinawa	43.9	43.9	37.7
Yokosuka	40.3	40.3	30.2

Source: U.S. Department of State Web site located at <http://www.state.gov/rates/> and accessed January 2007

Other DOD programs

We looked at the DODEA to identify ways to improve the process of hiring from within CONUS for OCONUS positions. DODEA has access only to bonuses, pay, incentives, and application processing mechanisms that are available to other DOD agencies. However, DODEA does have a centralized Human Resource Regional Service Center that is responsible for managing the human capital policies and programs, which include recruitment oversight, educator certifications, classification and compensations, labor management relations, and data collection. All DODEA employees must apply for open positions via USA Jobs, just like all other DOD employees, but the centralized oversight provides them a distinct advantage over the locally managed efforts currently used by DOD medical activities. DODEA has instituted centralized data collection to track the timeliness and accuracy of personnel action processing, process travel orders and entitlements, and the timeliness and accuracy of pay-related inquiries and grievances. This centralized approach allows them to provide timely feedback on the status of applications to the applicant and the school needing the support.

DODEA does hire school nurses and reports no substantial gaps in positions. They attribute this success to the nature of the pool of professional nurses who make a career of DODEA and relocate to

positions as needed. They are also able to attract dependents of military members stationed OCONUS by offering the same work schedule as school age children with no shift work and with summer vacations.

Army and Air Force initiatives

The Army and Air Force also have medical treatment facilities located overseas. It seems prudent for BUMED to better understand the OCONUS medical resources and capabilities provided by their sister Services to determine whether any unnecessary redundancies exist, identify any business practices that can be borrowed, and discover opportunities for potential partnering. To assist, we provide illustrative examples of how the Army and Air Force have each tackled a resourcing issue through regionalization and partnering with a local civilian hospital, respectively.

Army

The U.S. Army Europe Regional Medical Command (ERMC), headquartered at Nachrichten Kaserne in Heidelberg, Germany, is responsible for providing accessible and effective health care to the European theater [47]. To meet the European challenge of the ever-changing medical environment and the military force, the command operates the Landstuhl Regional Medical Center, the only United States military referral center offering subspecialty care in Europe; hospitals in Heidelberg and Wuerzburg, Germany; and 28 outpatient medical clinics in less populous Army communities in Germany, Belgium, and Italy.

Air Force

Aviano Air Base is an air base south of the Alps in Italy. The host wing at Aviano Air Base is the 31st Fighter Wing, home to two F-16 fighter squadrons – the 510th and the 555th [48]. The 31st Medical Group supports the readiness of 31st Fighter Wing and associated units throughout the southern region of Italy. Its mission is to ensure the health of its community by providing optimal customer-focused medical care from internal, DOD, and host nation resources [48].

The 31st Medical Group has played an integral support role in the buildup that has taken place at Aviano since the Bosnian peace-keeping efforts began in 1994. Addressing the predominant "quality of life" concern of the expanding American community at Aviano, a first-of-its-kind joint-lease agreement was signed in August 1996 with the neighboring community of Sacile to lease two floors of their inpatient hospital. Massive renovations brought the leased wing to American regulatory standards. Milestones reached at Sacile since its inception include the opening of inpatient services in January 1997, performance of the first surgery in November 1997, and delivery of the first baby in December 1997. In addition to the completion of the Sacile project, the 31st Medical Group has helped developed a TRICARE Network consisting of over 30 host nation providers and six local hospitals [48].

Expanding the network

Interviews with MTF commanders in Europe reveal that they rely upon interpersonal relations to develop associations with civilian providers to acquire specialty care and services not available within their facility and to augment shortages induced by one-deep providers. Since the success of these relationships depends upon personal relationships and availability of health care resources in the local area, Commanding Officers of the MTFs overseas have taken the lead in developing PPNs.

Only Europe reports any level of success with PPNs. Commands in Japan report that they are able to purchase care from the civilian sector on a case-by-case basis, but have no established network. The TRICARE Area Office Europe has recently initiated a method to help commands make decisions among available providers based upon relative quality, but the mechanics of arranging care still require substantial human intervention to determine what types of care are available, make appointments, provide translation services, and arrange transportation from military bases to the provider's facility.

Access to the PPN from the patient's perspective within Europe appears to be remarkably transparent, but requires constant clinical and administrative oversight by the MTF commanders. The need

for this vigilance is primarily due to the nature of the national health insurance programs in Europe. First, and foremost, since U.S. beneficiaries are not European citizens, purchased care is fundamentally “space available.” Accordingly, contracts similar to CONUS-based managed care support contracts that guarantee access is not feasible. Second, because the national health insurance programs do not bill patients, a consistent method to process bills and update beneficiaries’ electronic medical records does not exist. These steps fall back to the local MTF for processing, interpretation of services provided, and monitoring of payment.

In comparison, care purchased in Japan is far more difficult. First, access to civilian health care is heavily reliant upon the Japanese interns at the naval hospitals being able to gain access on a case-by-case basis for U.S. beneficiaries. Second, unlike Europe where requests for payment are sent to the local MTF for further processing, Japanese health care providers require payment up front. Local MTF commanders have mitigated this requirement by paying for the care out of their supplemental care funds and processing requests for reimbursement. Third, as suggested in the discussion regarding national health care systems, care in Japan is substantially different from the care that Americans believe to be the standard for care. While this falls mostly within hospitality issues, it also permeates into basic health care processes of pain management. Most important, the Japanese health care system is reportedly at full capacity, leaving little room for space-available care for U.S. military beneficiaries.

Relationships with Japanese providers are quite tenuous. Japanese providers see differences in philosophy of medicine, nationalized medicine, language, and liability concerns as significant barriers to establishing a PPN for U.S. beneficiaries. Furthermore, recent history in both Yokosuka and Okinawa has shown that “ugly American” incidents can severely limit access for U.S. beneficiaries for long periods of time. Moreover, during the interview with the Director of Surgical Services at the hospital closest to the Naval Hospital Yokosuka (Kyosai Hospital), we were advised that the hospital saw three main obstacles with developing a PPN contractual arrangement with Japanese facilities. First, was the language barrier which was a major quality concern for the Japanese physicians when they obtain informed consent from American patients. This concern carried over

to the nursing staff and the ability to communicate with the patient to ascertain whether changes in condition had occurred. Second was the issue of standards for care. Whereas the Japanese government is striving to reduce bed days, they do not intend to adjust to American standards for pain management. Finally, the issue of malpractice claims was a concern. Americans are viewed as being more inclined to engage in malpractice claims than the Japanese. There was reluctance to accept this additional liability.

However, the purchased care data suggest that there are potential opportunities to obtain care from the civilian sector. The highest average cost per outpatient visit is in Spain (\$363) and the lowest in Japan (\$104); the highest inpatient costs are in Spain (\$4,745), and the lowest are in Japan (\$4,406). However, since the data are collected via translator and third party at the MTF, the data to ascertain the relative value units (RVUs) for outpatient care, relative weighted procedures (RWPs), or bed days for inpatient care to indicate the complexity of the care are not available. These data are critical to determining the merits of pursuing extensions of PPN or other support agreements. However, it is unquestionable that network expansion has potential to reduce the burden of one-deep providers and the need for a fully funded billet to provide the care that would occupy only a partial FTE employee. Of interest is the trend lines in both outpatient and inpatient purchased care. Both are trending downwards, which could be a reflection of fewer eligible beneficiaries or reduced availability of excess capacity (or willingness to accept military patients) in the civilian sector. Actual workload data suggest that there is a similar downward trend in direct health care for Navy MTFs overseas, albeit less substantial. Naval Hospital Okinawa is the exception to this downward trend.

Challenges

Although there are opportunities to civilianize some limited OCONUS military positions, we find that there are substantial challenges, costs, and risks involved with the magnitude of the conversions as defined by the QDR. For the most part, our research shows that a large number of OCONUS military-to-civilian billet conversions cannot be executed without negatively affecting the “non-cost” factors considerations posed by the FY07 NDAA: quality, access, re-

tention and recruitment, and medical readiness. We outline the challenges.

Local nationals

While hiring local nationals appears to be the most cost-effective means of executing conversions, the possibility of finding English-speaking individuals qualified (appropriate credentials) for medical specialties appears to be limited. Moreover, a review of the civilian personnel currently onboard relative to the number of military in administrative positions suggests that most of the capacity to fill civilian positions for administrative and facility support may have already been met. More important are concerns with the ADP requirements and barriers to requisite background investigations imposed by the conditions of employment and laws within Europe.

Aging populations have placed a substantial demand for health care workers in every industrialized nation. As in the U.S., the populations in Japan, Italy, and Spain are living longer and growing older while experiencing nearly zero population growth. This fact combined with a limited number of English speaking professionals makes reliance upon local nationals risky. However, anecdotal evidence suggests that there is little turnover with this population and that the local nationals are as loyal to the mission of the facility as U.S. employees. Of consequence in Japan are the requirements of Master Labor Contracts and control of the Government of Japan on new positions. Negotiations to initiate a new local hire position may be in excess of 6 years for new job descriptions making new medical positions in Japan unlikely in the immediate FYDP.

Status of forces agreements

Status of Forces Agreements (SOFAs) identify international limits on civilian hires overseas. The United States entered into a SOFA with the North American Treaty Organization (NATO) in 1951 and with Japan in 1961. Spain and Italy are covered under the NATO agreement. The United States drew a supplemental agreement with Italy in 1995, and entered into an Agreement of Defense Cooperation with Spain in 2003 [49].

The NATO agreement requires that the conditions of employment for local civilians be consistent with the laws of the host country. Local civilian labor requirements of a force or civilian component must be satisfied in the same way as the comparable requirements of the receiving state and with the assistance of the authorities of the receiving state through the employment exchanges. The conditions of employment and work, in particular wages, supplementary payments, and conditions for the protection of workers, must be regulated by the receiving state. Such civilian workers employed by a force or civilian component are not to be regarded for any purpose as being members of that force or civilian component. This also applies to Spain.

Article 4 of the Agreement of Defense Cooperation (ADC) with Spain specifies that:

The hiring of local labor personnel shall be conducted by the Spanish Ministry of Defense, which shall establish the services necessary to meet the changing needs of such a labor relationship, with special reference to the organization of hiring competitions, referral of candidates, the signature of contracts, and the payment of wages.

The U.S. government may, on an exceptional basis and with the approval of the Spanish Ministry of Defense, “directly recruit and select persons for appointment to positions having a technical nature or specialized requirements, or to positions in labor shortage categories.” When the U.S. needs to reduce the number of local personnel, it must consult with the Spanish Ministry of Defense, unless the reduction is “necessitated by actions of the Government of Spain.”

The Japanese SOFA requires that the U.S. coordinate with and ask for assistance from the Japanese government whenever the U.S. requires services that may have an adverse effect on the economy of Japan. Materials, supplies, equipment, and services that are required from local sources for the maintenance of the United States armed forces and the procurement of which may have an adverse effect on the economy of Japan shall be procured in coordination with, and, when desirable, through or with the assistance of, the competent authorities of Japan. The SOFA makes no mention of labor specifi-

cally, and services are interpreted as labor in this case. Thus, if the U.S. military were to hire civilian doctors or other medical providers, the military would need to coordinate with the Japanese government.

Conditions of employment

The overall legislative guidance for designing a foreign national employment program was established in section 408 of the Foreign Service Act of 1980. United States Code (U.S.C.) 22 later codified this, section 3968. The law stipulates “to the extent consistent with the public interest, each compensation plan shall be based upon prevailing wage rates and compensation practices (including participation in local social security plans) for corresponding types of positions in the locality of employment”[49]. Subsequent interpretations, within Europe, have determined that the conditions of employment “will be favorable enough to meet existing fair standards in the labor market, but not so advantageous as to create a privileged group within the country” [50].

One of the more consequential limits on the ability to hire local nationals resides in current legislation and policy that requires DOD to enforce appropriate safeguards to protect sensitive information as set forth in the TMA policy on “Security Clearances for Host Nation Local National Employees Overseas.”²³ While the policy does permit foreign nationals to access TMA data systems through the Composite Health Care System (CHCS) and in limited instances the Military Health System (MHS) Management Analysis and Reporting Tool (M2), it does require compliance with the DoD 5200.R, which states, “foreign nationals employed by DoD organizations overseas, whose duties do not require access to classified information, shall be the subject of record checks that include host-government law enforcement and security agency checks at the city, state (province),

²³ The TRICARE Management Activity policy references the Privacy Act of 1974, the Health Insurance Portability and Accountability Act (HIPAA), and the DoD 6025.18-R “DoD Health Information Privacy Regulation,” the DoD 5200.2R “Personnel Security Program,” and the DOD Information Technology Security Certification and Accreditation Process (DITSCAP) as guidance for their policy.

and national level, whenever permissible by the laws of the host government.”

The policy further stipulates that non-U.S. citizens must work under the direct supervision of a U.S. citizen. In all nations under consideration for this study, the conditions of employment or national law prohibit fingerprinting and background investigations of local nationals. The HRO in Rota, Spain, and Sigonella, Sicily, has worked with the local Navy Criminal Investigation Service (NCIS) and the local law enforcement agencies to develop a modified background process. For Japanese employees, privacy acts are much more restrictive than in the U.S., which means security clearances cannot be provided to foreign nationals. A Limited Access Authorization (LAA) is allowed when it is determined that all requirements of foreign disclosure have been reached with the government of Japan. The HRO has not been able to conduct required single scope background investigations (SSBIs) since September 11, 2001.

Spain

Conditions of employment within Spain are established by a December 1988 agreement between the Kingdom of Spain and the United States. This document was revised and approved in April 2002. In addition to the rules regarding local hires, Article 15 of this agreement stipulates that the Naval Station Rota is under Spanish command, with rules and procedures mutually agreed upon by the Spanish Commander of the Base and the Commander of the U.S. forces. This agreement further defines the requirements for documentation for entering and exiting the base, but exempts the military, civilian employees, and dependents stationed in Spain from registration and control as aliens. However, the Spanish government maintains control of security requirements and procedures that could restrict access to the military installations. The agreement sets the maximum permanent number of personnel as 4,250 military and 1,000 civilians. At the present time, the U.S. forces are well within these limits with approximately 1,446 military and 460 civilians.

The agreement allows the U.S. government to bring contractors onboard the base in limited numbers, providing they are certified to have specialized skills not readily available in Spain. The Spanish government must approve entrance to Spanish bases; processing times for these requests may take up to 6 months.

Spanish local nationals hired to work at U.S. activities are considered to be employees of the Spanish government and are therefore indirect hires. Agreements between the Spanish and U.S. governments mandate that the ratio of local nationals to U.S. civilian employees not vary from the 1988 levels. At that time, the ratio of local nationals to U.S. civilians was 70 percent local national and 30 percent U.S. civilians. The HRO in Spain carefully monitors this ratio across all U.S. agencies in Spain to ensure that this requirement is met.

On balance, managing the force with local nationals is more complicated than with U.S. civilians. Other than the 70/30 split that must be maintained, Spanish tax laws make “buy-outs” of early retirement unattractive to the individuals. Additionally, lateral movements within pay grades are not allowed by Royal decree. The HRO director has been able to use career ladder (step increases) to negotiate around the lateral movement constraint, but that ultimately increases personnel costs. Should military installations in Spain be substantially downsized, these restrictions on either eliminating local national positions or moving them internally have potential long-term implications.

According to the Department of State Web site, the January 1986 entry of Spain into the European Union (EU) drove economic policies towards expanded trade, investments in industry, and improvements in infrastructure that resulted in dramatic reductions of unemployment across the nation from 23 percent in 1986 to 8.6 percent in 2006. However, studies suggest that low migration and inflexible wage differentials drive large and persistent unemployment variations across Europe. As depicted in table 26, this is particularly true in Southern Spain, where the unemployment rate was

5.2 percent higher than in Spain overall. Despite the general guidance that U.S. employment should not be more attractive than employment in the nation overall, the high unemployment in Southern Spain makes employment on the military base versus unemployment appear to be an attractive opportunity.

Table 26. OECD unemployment rates for selected nations and regions, 2004 and 2005

Country	2004	2005
Italy	8%	7.7%
Campania (Naples)	15.6%	14.9%
Sicilia (Sigonella)	17.2%	16.2%
Japan	4.4%	4.1%
Spain	9.2%	8.6%
Andalucía (Rota)	17.1%	13.8%
USA	5.1%	4.6%
Europe	8.6%	7.8%
<u>OECD Total</u>	<u>6.6%</u>	<u>6%</u>

Source: OECD Labor Force Survey, 2006

Interviews with the subject matter experts in Rota, Spain, suggest that jobs for local nationals are filled quickly when they are advertised, but that a requirement to speak English is a persistent barrier to identifying qualified workers. The HRO in Rota has initiated English as a Second Language (ESL) classes on base to improve the career progression opportunities for current employees; it is not, however, available to potential employees. Unfortunately, there are no data to evaluate the availability of the population at large that speak English. Moreover, the HRO director was doubtful that the highly technical specialties and professionals, with the requisite credentials, would be available within the local workforce.

Spanish law covers benefits for local hires, which results in highly regulated policies. The main purpose of these regulations is to protect an employee's rights. Similar to U.S. civilians, Spanish citizens work a 40-hour week, but are only eligible for Spanish holidays. Annual salaries are paid as ei-

ther 14 payments or 16 1/2 payments annually. If the employer chooses 14 payments, it must pay the monthly salary plus two extra payments due by July 10 and December 15 (this is the process used by the U.S. government). Local nationals are only eligible to receive a vacation of 21 business days for each full year worked. There are no sick days per se. If an employee gets sick, a physician must sign a *baja* confirming that the employee is unable to work. An employee retains the right of return to his/her job and is paid full pay for the period of time the employee is in a *baja status*. *Baja* may last up to a full year. Additional paid benefits include 15 days (including weekends) for a marriage, 2 days for the birth of a child or the death of a family member, 1 day for home relocation, and 4 months for maternity leave.

Italy

Conditions of employment within Italy are different from those of Spain in that the employees are considered to be direct hires via the Italian government. Like in southern Spain, the high unemployment in southern Italy makes employment with the U.S. government an attractive opportunity. Vacancies are filled by word of mouth relatively soon after the position is announced. Italy is not constrained by the Spain-specific 70/30 percent split rule for local nationals to U.S. civilians. With some exceptions for positions that can clearly not be filled by local nationals due to security constraints, new positions must be advertised to the local market before they can be recruited from the United States or elsewhere, unless the local government certifies that the specialty is not available from the local market. This can add several weeks or months to the recruiting process. Like in Spain, the availability of qualified local nationals is unknown, but believed to be limited at best. However, Italy has the advantage of having larger metropolitan areas, with large medical treatment facilities and a medical school nearby. More important, the Human Resource Service Center (HRSC) is located in Naples with ready access to the labor relations specialists, classification staff, and recruiting experts.

Italian law and unions regulate the rules governing local hires. Naturally, the main purpose of these regulating bodies is to protect the employee. Italian citizens work a 36-hour week, but are scheduled for 8-hour days 5 days per week. The delta between the 40 hours worked and the 36-hour limitation are made up as designated days of rest. Generally, these days are scheduled on American holidays not covered by Italian law. Italians receive a graduated amount of annual leave ranging from 22 to 28 days depending upon the number of years of employment. Employees are eligible for 12 to 36 months of sick leave (the maximum number of months that they can receive pay for is 12 months) depending upon whether the absence is due to an illness or on-the-job injury. During this period, employees are paid a graduated percentage of their salary dependent upon years of employment and the number of months that they will be absent. For example, an employee with less than 10 years' employment may receive 4 months of sick leave at 100 percent of their pay, and the next 4 months will be at half pay. During pregnancy and for 1 year following delivery, women may not work nights. Female employees are entitled to be absent from their work for the 2 months preceding the expected delivery date and for 3 months following delivery.

Japan

Rules governing local nationals in Japan are extremely complicated. Like Spain and Italy, these employees are considered to be employees of the host nation and are treated as indirect hires. The government of Japan is the legal employer, and the terms of employment are spelled out in the international agreement titled "Master Labor Contract (MLC)."²⁴ Although "contract" is in the title, it is in fact an international agreement between the Japanese and U.S. gov-

²⁴ The other types of Japanese employees are categorized under the indirect hire agreement (IHA). These are similar to non-appropriated fund employees and generally those personnel employed in welfare and recreation programs and military exchanges. Medical personnel are covered under the MLC.

ernments. This agreement is managed under the guidelines of the U.S. Foreign Service Act of 1980 and implementing DOD directives [51]. The U.S. may not import third country nationals (non-U.S. and non-Japanese) to work on U.S. bases in Japan. Any new job description must be agreed to among the U.S. military Service representatives in Japan's Joint Labor Policy Committee, and then by the government of Japan. The HRO for the Naval Forces Japan reports that the average time for approval of a new job description is 3 to 8 years. Moreover, the funding arrangement of new positions requires coordination with all other DOD activities within Japan. At present time, there are only two approved medical-specific job descriptions (physicians with limited scope of duties and nurses).

Compensation is based on prevailing practice, which is determined by the Japanese government's National Personnel System (NPS). However, basic pay is augmented by up to 10 different allowances, which equates to about 5 extra months of pay each year. According to the HRO Yokosuka, Japan is different from most host nations in that the government of Japan has assumed all labor costs for up to 23,055 employees under the Special Measures Agreement (SMA) [52]. The Commander Navy Forces Japan (CNFJ) allocates the Navy's share of these cost-shared positions in proportion to the funded number of positions within a command.

Hiring active duty family members

Robust labor unions in Italy and Royal decrees in Spain mandate that new positions be offered to the local nationals prior to opening them to any other option to fill new positions. Additionally, all nations restrict third party players in civilian positions. This means that employees must either be local nationals or U.S. residents or citizens. Given the higher cost implications of hiring from CONUS, the next best option after local nationals is to recruit active duty family members (ADFM's).

Anecdotal information from site visits to the areas of interest suggests that there is not a large number of ADFM's seeking employ-

ment. This is complicated by the lack of a rolling roster of available ADFMs interested in employment. We were able to obtain preliminary data from the 2006 Navy Spouse Survey. The survey results presented in table 27 suggest that a large percentage of spouses OCONUS are unemployed by choice. Reasons offered for this choice predominantly surround decisions to remain at home to care for their children. However, the percentage that is unemployed and actively job hunting is encouraging.

Table 27. 2006 Navy spouse survey response to why the respondent was unemployed

Unemployment	CONUS	OCONUS
Not employed for other reasons	13%	9%
Not employed actively job hunting	15%	20%
Not employed, by choice	72%	70%
Receiving unemployment payment	1%	0%
Retired	2%	3%

Source: 2006 Navy Spouse Survey, Navy Personnel Research Science and Technology

Hiring from CONUS

Hiring from CONUS does appear to be the most reasonable means to execute conversions. However, experience with conversions from CONUS to date suggests that this could result in gapped billets, which places commands at risk. Difficulties with conversions in CONUS suggest an insufficient U.S. labor market to attract providers, which may require additional incentives. A review of the Bureau of Labor Statistics (BLS) Web site suggests that the demand for all types of health care workers will continue to experience rapid growth as the population ages and technology grows. We looked at the data and comments regarding growth for the specialties most affected by the conversions and found that between 2004 and 2014, as shown in table 28, most of these specialties will have more demand than supply and demand will grow at a rate of 18 percent or more.

Table 28. Bureau of Labor Statistics reports of salary (in 2007 dollars) and job growth for selected health care employees

Category of health care employee	Median salary	Job growth
Audiologists	\$55,959	9 to 17%
Cardiovascular technicians	\$42,430	≥ 27%
Dental assistants	\$45,255	≥ 27%
Dieticians	\$47,475	18 to 26%
Human resource managers	\$88,999	18 to 26%
Laboratory technicians	\$49,748	18 to 26%
Licensed practical nurses	\$36,955	≥ 27%
Medical assistants	\$26,773	≥ 27%
Medical comptrollers	\$106,535	9 to 17%
Medical records techs	\$27,839	≥ 27%
Nuclear medicine technician	\$61,508	≥ 27%
Occupational therapists	\$72,997	≥ 27%
Optometrists	\$96,180	18 to 26%
Pharmacy technicians	\$29,416	≥ 27%
Physical therapists	\$65,485	≥ 27%
Physician assistants	\$75,509	≥ 27%
Psychologists	\$59,778	18 to 26%
Radiology technicians	\$47,535	18 to 26%
Registered nurses	\$56,928	≥ 27%
Respiratory technicians	\$46,931	18 to 26%
Social workers	\$49,378	18 to 26%

Source: Bureau of Labor Statistics Web site <http://stats.bls.gov>

These data suggest that competition for scarce human capital resources could either result in paying higher salaries or offering greater incentives to compete with other employers. It is feasible that the benefits of allowances and hiring bonuses, combined with the opportunity to live overseas, may provide ample incentive to allow the federal government to compete for these resources. However, this could raise costs in the long term.

Of minor concern is the current DOD policy of a 3-year maximum activity length for civilian employees, which could increase costs and decrease continuity. Additionally, past experience with the EDIS

program suggests that hiring GS employees will be difficult in Asia. In fact, the Navy offers incentives for active duty sailors (other than Hospital Corpsmen) to fill billets in Yokosuka and Okinawa, as well as selected sites in Europe.

Network expansion

As previously suggested, expansion of the network comes with cultural and language barriers, combined with challenges of managing the expectations of sailors and their family members. There are no formal networks for OCONUS to expand, and reliance upon informal agreements where the U.S. military represents excess capacity presents risks of increased aerovacs or negative patient outcomes. Additionally, hospitality issues with inpatient care evidenced by the perception that the nursing care provided outside of MTFs is significantly diminished could substantially detract from the willingness of military members to serve overseas should the military become too reliant upon network care. Of note, the existing informal agreements are heavily reliant upon personal relationships with the local civilian providers. Command turnover (tour length) makes further development of relationships difficult.

Quality

For the most part, quality is generally considered to be a lagging indicator in that most military institutions track mishaps and incidents after the fact. However, within the medical community, clear guidance exists to avoid negative patient outcomes. The large amount of attention paid to this factor is due to the nature of the medical profession and the oath to “do no harm.” The current DOD directive prescribing the safeguards and principles towards ensuring quality of care defines quality in health care as “the degree to which health care services for individuals and populations *increase the likelihood* of desired health outcomes and are consistent with current professional knowledge.” More specifically, the services provided will be safe, effective, patient-centered, timely, efficient, and equitable [13].

In pursuit of the intent to ensure safe and equitable health care, DOD has put in place measurable standards. These standards include the requirement that the Joint Commission on the Accredita-

tion of Healthcare Organizations (JCAHO) accredit all military medical treatment facilities. The directive further requires that all preferred provider networks maintain accreditation either through JCAHO or through the National Committee on Quality Assurance (NCQA). There are no exclusions within this directive for OCONUS networks, but it does allow for waivers by the Assistant Secretary of Defense for Health Affairs.

Provider standards include a licensure requirement, which may be waived if the provider practices under a plan of supervision.²⁵ The license must be from the state in which the facility operates, with the exception of military providers who are granted portability for their license. Accompanying the standard for maintaining a state license is the stated need for continuing education to document skills maintenance. Compliance with the requirements of the DOD guidance primarily falls upon the MTF's commanding officer to certify that providers are licensed, maintain their skills, and practice within the parameters of their credentials.

Understanding the wide range within the category of providers, table 29 represents the current array of licensed provider billets slated for conversion. While this list only represents about 15 percent of the 336 billets under consideration, it does not include another 54 registered nurses who are also required to maintain a current license. This brings the total number of billets requiring a license to perform their duties to about 31 percent. Should the decision be made to convert the 124 general duty hospital corpsmen to licensed practical nurses, the conversions would represent a requirement for licensure and continuing education for almost two-thirds of all billets in this pool. While not overwhelming in CONUS, it presents unique challenges OCONUS.

²⁵

Providers include physicians, dentists, nurse practitioners (including midwives and certified nurse anesthetists), clinical dietitians, physical therapists, psychologists, podiatrists, social workers, optometrists, clinical pharmacists, audiologists, speech pathologists, physician assistants, dental hygienists, chiropractors, mental health counselors, professional counselors, and marriage and family therapists.

Table 29. Licensed Navy medicine OCONUS medical billets identified for conversion

Specialty	Number of billets
Audiologist	9
Clinical psychologist	4
Dentist	8
Dietitian	8
Physician	13
Social Worker	8
<u>Total</u>	<u>50</u>

Anecdotally, interviews with the commands in question, combined with findings from the literature, suggest that quality, or at least the perception of quality, is a chief concern should the commands have to rely upon the civilian sector for their health care. For example, the Italian and Spanish health care systems rely heavily upon the family members to provide basic care of meals, baths, linens, and so forth. When military members are hospitalized by necessity, they are confronted with issues of language barriers; furthermore, if they are unaccompanied, the military commands (generally the hospitals) must act as their surrogate families to ensure that basic hospitality needs are met. The most specific concern regarding quality was in regards to dental care in Spain. The professional staff at the Naval Hospital specifically noted that the standard for care in Spain is dramatically lower than the care provided in the United States. In particular, they noted a disregard for attention to the risk of infection as evidenced by the lack of personal protective equipment that is commonly worn by U.S. dental workers and the apparent use of non-sterilized equipment. This inattention to infection control processes is compounded by the enhanced “dentist-phobia” that results from the language barriers.

Additional concerns are the previously mentioned American expectations of responsiveness. All other nations experience negative perceptions of a difference between U.S. standards of patient-centered health care (for example pain management and bedside manner) and the health care that those other nations provide. The most noteworthy concern is the language barriers, which not only affect the perceptions of care; they can pose potential safety concerns.

Military treatment facilities are still held responsible for the quality of care within their AOR, if not in reality, in perceptions from the beneficiaries and line leadership. Commands can mitigate the risks of sending care into the civilian sector by reviewing licensure and educational attainment, scrutinizing malpractice claims against the civilian providers, and seeking English-speaking providers when possible. MTF commanders should also conduct regular peer review of the treatment protocols and site visits to the facility or provider's office. Perhaps the most attainable quality indicator is the feedback from the patients who have received the treatment. Fortunately, all Navy MTFs that were surveyed in this study had taken steps to monitor the quality of care in the civilian sector.

Access to care

While table 30 suggests that there should be adequate providers remaining within the system to meet the demands of the health care needs of the population, these aggregate data do not address the impact of having providers who are one-deep. Steps to alleviate the pressure on these providers placed upon the demands of being the sole watch stander 24 hours per day/7 days per week have been enacted. When possible, these providers are rotated back to the states for duty after 12 months. However, the other venue of relief to provide "circuit rider support" of borrowing labor to allow the sole provider time for leave and educational requirements places an undue burden on the other commands that loan the labor, thereby impacting their own access to care. That said, since conversions replace personnel with civilians, providing the billets are not gapped, the conversions suggest that the reduced demand of not having to take time for military essential duties should improve rather than detract from access to care.

Table 30. Average FY06 individual work relative value units per provider

	Outpatient visits	Individual work RVU	Available physician FTEs	Average work RVUs/FTE
NH Guam-Agana	108,958	61,046	230.2	265
NH Guantanamo Bay	22,775	8,306	112.3	74
NH Naples	81,793	42,104	247.7	170
NH Okinawa	245,211	236,768	440.8	537
NH Rota	54,013	37,638	189.3	199
NH Sigonella	64,109	44,743	236.4	189
NH Yokosuka	191,071	82,809	486.7	170

Source: Military Health System (MHS) Management Analysis Reporting Tool (M2). Full Time Equivalents reflect time reported in the Medical Expense Reporting System (MEPRS) code for available clinician time in outpatient care only.

Medical readiness

One of the chief concerns with conversions is the potential for gapped civilian positions (similar to the vacancy rate in CONUS). This has the potential to increase reliance upon aerovacs out of theater, which represents a personnel loss to the member's command and an actual expense from the command's budget to pay temporary assigned duty (TAD) costs for the member and possibly the member's non-medical attendant. Of further concern is the reduced capacity of aerovacs to make "on-demand" lifts for personnel with medical emergencies.

Recent increases to operational tempo in support of GWOT have necessitated that the previous doctrine to not task OCONUS commands with support for individual augmentations be changed. As displayed in table 31, a substantial number of military members from activities based in Japan have been tasked with support requirements. These augmentees are in addition to the personnel supplied by the Naval Hospital Okinawa's component activity in support of the 3rd Marine Logistics Group (MLG). In fact, it is important to note that both Okinawa's and Yokosuka's missions directly support operational platforms in the 3rd MLG in Okinawa and the USS Kitty Hawk in Yokosuka.

The impact on medical readiness in terms of the individual augmentee and the direct support to the readiness of operational commands in theater is difficult to ascertain, but these issues must be considered in defining the types of billets to be converted and the risks associated with gaps in coverage. Since OCONUS activities do not have a robust network, the increased number of deployments from OCONUS, combined with gapped civilian positions has potential to adversely impact access. Moreover, the need to have an adequate number of military medical members who are ready to deploy upon short notice was evidenced in the humanitarian assistance and rapid response provided by the Naval Hospital Okinawa in January 2005.

Table 31. Individual augmentees from MTFs between March 2003 and December 2006

Activity	Enlisted	Officers	Grand Total	Average days per event
NH Guam	24	15	39	146
NH Guantanamo Bay	1		1	182
NH Naples	6	20	26	67
NH OKINAWA	48	101	149	75
NH Rota	9	15	24	80
NH Sigonella	8	8	16	90
NH Yokosuka	47	31	78	136
All other BSO-18 activities	9,399	3,759	13,158	112

Source: Expeditionary Medical Program for Augmentation and Readiness Tracking System (EMPARTS) as of February 2007. Data do not include training events or peacetime support to BSO-18 activities.

Retention and recruitment

Officers

We requested the advice of medical officer community managers regarding the impact of conversions on retention. For both retention and recruiting, much of the evidence is anecdotal, derived from conversations with active duty members articulating their plans and from the field recruiters stating their observations.

Officer community managers report that military-to-civilian conversions have had minimal impact on retention, to date. In some spe-

cialties most affected by the conversions, losses have exceeded gains. Some officers have elected to retire and take military-to-civilian conversion positions; others plan to retire when the positions open in their geographical area of interest. In a few specialties, some officers view additional military-to-civilian conversions as jeopardizing their careers and leave prior to the 10-year mark. Anecdotal evidence exists to support the notion that morale of military providers is adversely affected by the perception that civilian providers earn more, but are not required to stand military watches or assume responsibilities of collateral duties.

On the recruiting side, military-to-civilian conversions have had a perceived impact on the direct accessions. These are fully trained individuals who want to join the Navy Medicine team. The applicants, in most cases, are looking at the military as a long-term career. The issues of conversions are topics of concern during recruitment interviews with potential candidates. Military-to-civilian conversions are almost never issues when student programs are discussed since scholarships are awarded to the students if they qualify.

Enlisted

Enlisted community managers generally concurred with the officer community managers. In addition, they solicited the viewpoints of the enlisted detailers who have the benefit of regular interactions with their constituents. They added that conversions have the following positive impacts:

- Potentially enhancing the continuity of care.
- Reduced inefficiencies of lost productivity resulting from transition costs of retraining following permanent changes of station (PCS) moves.
- Reduced costs within the military PCS accounts.

On the negative side, decreased OCONUS assignment opportunities could negatively affect retention, particularly for selected specialties with limited rotation options. Drops in retention for sailors in critically manned highly technical specialties could result where military personnel think issues such as stability are more important than continuing their active duty career and leave the Service.

Losses have been relatively consistent for the past 3 years for enlisted medical personnel, including the specialties programmed for deletion as a military requirement (medical photography dialysis, urology, electroencephalography, and dermatology). Despite the large number of conversions impacting enlisted billets, anecdotal evidence from the enlisted community manager suggests that there is no immediate concern among enlisted personnel regarding conversions. On balance, it is perceived that the operational tempo is having a bigger impact on recruitment and retention than on changes to the billet structure.

Unlike officers, enlisted personnel are not recruited by specialty. Rather, they are recruited into a pool and trained to fill vacancies within specialties. The relatively shorter periods of time required to “grow” an enlisted technician compared to an officer streamlines the ability to adjust to personnel shortages within specialties. Community managers do advise that filling restricted opportunities for specialty training and overseas assignments may make it more difficult to promote recruitment into the Hospital Corps rating.

Shore duty rotation erosion

As discussed in the section on changes to the billet file, there have been large reductions to shore duty billets without a dual task for wartime requirements, which could result in unexpected deployments from shore duty assignments. Reductions to shore duty rotations mostly affect enlisted personnel. While there are no empirical data to track actual leave or stay decisions, there are surveys suggesting that increased unpredictability of deployments could have a long-term effect on retention.

Predictability in deployment was scored as the second highest overall issue (of 10 factors) identified as important or very important to the ability to improve work-life balance in the August 2005 Status of Forces Survey of Active Duty Members. As displayed in table 32, only increased pay ranked higher overall within the Navy, with 86 percent responding that increased pay was important or very important

compared to 83 percent for predictability in deployment.²⁶ However, predictability in deployments ranked higher among officers, with 87 percent responding that this was important or very important, compared to 77 percent for increased pay.

The results from the Status of Forces Survey for officers are consistent with the June 2005 Quick Poll on Medical Communities conducted by Navy Personnel, Research, Studies and Technology. Less than half of the medical department officers were positive about their future in the Navy. Top reasons to stay in the Navy were reported as loyalty to nation or Service, patriotism, and benefits (pay, health care, and retirement). Top reasons to leave the Service were identified as administrative barriers required to get the job done, civilian job opportunities, morale in the community, impact of deployments on family, and unpredictability of deployments [7].

In addition to these surveys, the 2006 RAND report on *How Deployments Affect Service Members* reported that uncertainty surrounding deployment dates and destination was one of the more negative aspects surrounding deployments resulting in higher than usual stress and intention to stay in the military [6].

²⁶ The margin of error was reported as plus or minus 3 percentage points, rendering the difference between pay and predictability of deployment statistically equal.

Table 32. Survey Questions: How important is each of the following to your ability to improve work-life balance?

Quality of life issue	Navy enlisted			Navy officer			Overall Navy		
Issue	Important	Very important	Total	Important	Very important	Total	Important	Very important	Total
Increased pay	26	60	86	36	41	77	28	58	86
Predictability in deployment	32	51	83	34	53	87	34	49	83
Predictability in non-deployed workload	36	41	77	43	38	81	37	42	79
Child care	27	44	71	27	28	55	27	40	67
Spousal employment	28	39	67	26	24	50	26	36	62
Off-base housing	30	27	57	33	24	57	32	29	61
Financial counseling and financial wellbeing	31	28	59	28	18	46	31	28	59
Unit readiness	27	27	54	26	14	40	27	25	52
Family/marriage counseling/retreats	24	25	49	16	9	25	22	20	42
On-base housing	21	16	37	18	12	30	16	13	29

Source: August 2005 Status of Forces Survey of Active-Duty Members.

Organizational change

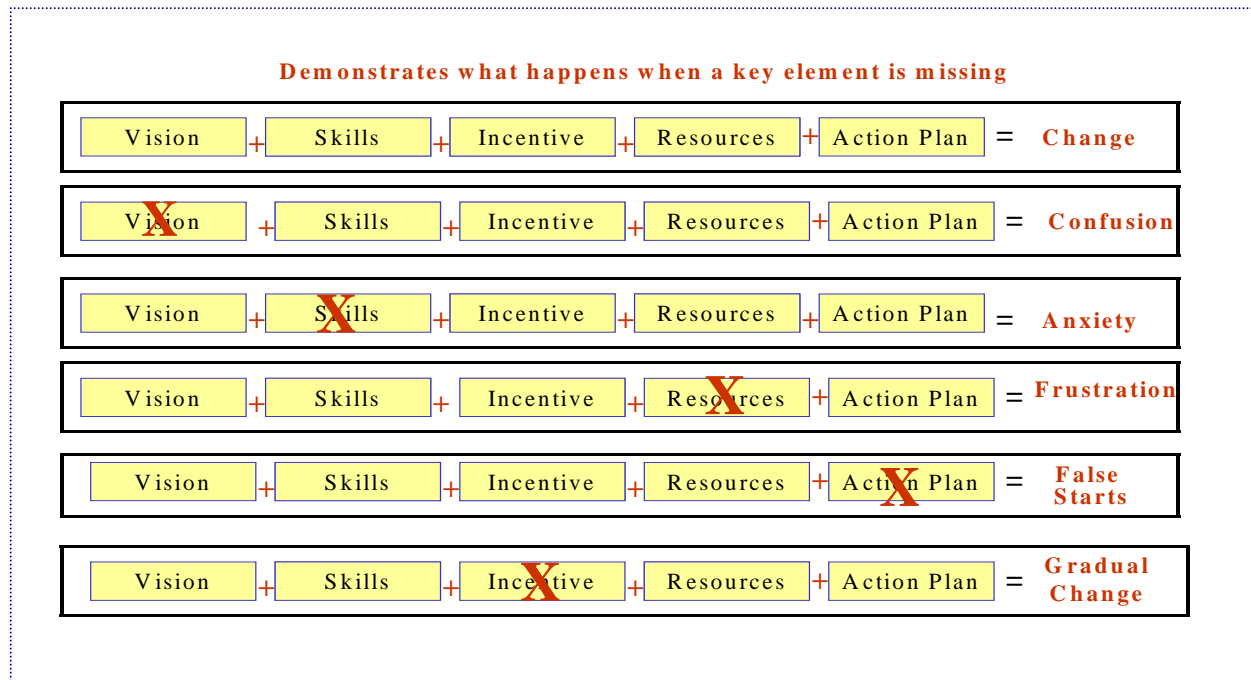
We have found that, as with most change, there is anxiety about embracing the OCONUS military-to-civilian billet conversion idea. This anxiety is compounded because the pressure to provide accessible, quality, and cost-effective health care to the fleet, Fleet Marine Force, and their families has never been more pronounced than in today's overseas environment. The difficulties encountered with the CONUS military-to-civilian billet conversion process inform policymakers that this course of action can be difficult, lengthy, and sometimes unattainable.

To successfully execute a large number of OCONUS military-to-civilian medical billet conversions requires a great deal of planning and collaboration across several organizational entities, many of which have varied priorities, skill levels, and resources. Figure 2 displays the five key elements that must be simultaneously in place to effect complex organizational change:

- Vision
- Skills
- Incentives
- Resources
- Action plan.

When one of those key elements is missing, confusion, anxiety, frustration, and false starts can occur within the affected organizations. Without the proper incentives, change will occur, but only gradually [49].

Figure 2. Elements of complex organizational change



Source: McKinsey Consulting Group (2005 briefing on complex organizational change [52])

General

There is no standard DOD-wide for overseas screening policy, which complicates business plan development. Additionally, there is great concern from Japan about the risks involved with conversions due to their geographical isolation, combined with diminished aerovac capacity.

Of significance to both Okinawa and Guam is the May 2006 agreement between the United States and Japan to realign 8,000 Marines assigned to the III MEF (Marine Expeditionary Force) and their family members from Okinawa to Guam by calendar year 2014 [51]. This timeline allows for human capital investment planning in Guam and eliminates the constraints of the Japanese government restrictions on hiring local nationals. As a territory of the United States, the only concerns would be the relative sparseness of available medical professionals to fill converted billets and the isolation of the island as a disincentive to attract medical professionals in an increasingly competitive labor market.

Summary

In today's budget environment, it is a fact of life that Navy Medicine will continue to be asked to find ways to do more with less. There are Navy health care specialties that simply do not have a military operational requirement, except for OCONUS rotation. These specialties are difficult to manage in uniform and put the commands at risk of gapped billets. Moreover, there are several active duty medical department billets that have gone chronically unfilled. Further, active duty specialists assigned overseas are being under-utilized because the demand (workload) for their particular specialty is not consistently needed, resulting in a degradation of their clinical skills and less than optimal use of scarce resources. We think all medical activities, regardless of geographical location, would be well-served to find ways to attain the correct mix of required health care personnel, through a variety of options, versus having an unfilled military billet or significantly under-utilizing an active duty specialist.

Last, evidence suggests that large-scale military-to-civilian medical billets conversions will be difficult to execute in Europe and that they will be almost impossible to implement in Japan. Furthermore, we don't think a test pilot program for OCONUS medical billet conversions is required because we found that the potential cost savings of these conversions isn't significant enough to outweigh the considerable risks. We think Navy medicine would be better served by exploring ways to regionalize and share OCONUS resources where possible.

Appendix A: Supplemental data

Navy medical department community billet-body data

Tables 33-37 provide officer and enlisted billet-body ratios for each of the active duty specialties. These data are included to suggest where inventory imbalances could possibly be mitigated by military-to-civilian billet conversions.

Table 33 provides the end December 2006 Medical Corps officer inventory versus FY07 billets authorized.

Table 33. Medical Corps (designator 210X) end December 2006 billet-body match

Subspecialty code	Subspecialty description	Net inventory	FY07 billets authorized	Difference	Percent manned
15A0	AVIATION MEDICINE	244	240	4	101.7%
15A1	AEROSPACE MEDICINE	56	71	(15)	78.9%
15B0/15B1	ANESTHESIA	118	138	(20)	85.5%
15C0/15C1	SURGERY	167	203	(36)	82.3%
15D0/15D1	NEURO SURG	16	15	1	106.7%
15E0/15E1	OB/GYN	109	111	(2)	98.2%
15F0	GENERAL MEDICINE	318	276	42	115.2%
15G0/15G1	OPHTHAMOLOGY	53	45	8	117.8%
15H0/15H1	ORTHOPEDIC SURG	124	130	(6)	95.4%
15I0/15I1	OTOLARYNGOLOGY	51	48	3	106.3%
15J0/15J1	UROLOGY	27	32	(5)	84.4%
15K0/15K1	PREV MED	33	52	(19)	63.5%
15K2	OCC MED	41	40	1	102.5%
15L0/15L1	PHYS MED & REHAB	5	3	2	166.7%
15M0/15M1	PATHOLOGY	68	67	1	101.5%
16N0/16N1	DERMATOLOGY	32	40	(8)	80.0%
16P0/16P1	EMERGENCY MED	112	118	(6)	94.9%
16Q0/16Q1	FAMILY PRACTICE	364	426	(62)	85.4%
16R0/16R1	INTERNAL MED	257	251	6	102.4%
16T0/16T1	NEUROLOGY	27	25	2	108.0%
16U0	UNDERSEA MED	82	97	(15)	84.5%
16U1	UNDERSEA MED, SUB	5	0	5	-
16V0/16V1	PEDIATRICS	153	130	23	117.7%
16W0	NUCLEAR MEDICINE	2	2	0	100.0%
16X0/16X1	PSYCHIATRY	88	100	(12)	88.0%
16Y0/16Y1	DIAGNOSTIC RAD	82	97	(15)	84.5%
16Y2	RADIATION ONCOLOGY	10	9	1	111.1%
1806	HLTH CARE MGMT	2	2	0	100.0%
	TOTAL	2646	2768	(122)	95.6%

1. Net (distributable) inventory extracts officers in training from the total inventory.
2. Billets authorized exclude transients, patients, prisoners, and holding (TPP&H) and include fair share distribution of billets coded as 2XXX, which can be filled by any medical department officer.

Table 34 provides the end December 2006 Dental Corps officer inventory versus FY07 billets authorized.

Table 34. Dental Corps (designator 220X) end December 2006 billet-body match

Subspecialty code	Subspecialty description	Net inventory	FY07 Billets authorized	Delta billets to inventory	Percent manned
1700	General Dentist	352	461	(109)	76%
1710	Endodontist	43	47	(5)	90%
1724	General Dentist ACP	115	80	35	144%
1725	Comprehen Dentist	103	113	(10)	91%
1730	Maxillofacial Prosth	11	6	5	183%
1735	Orthodontist	17	17	0	100%
1740	Operative Dentist	17	24	(7)	71%
1745	Oral Diagnostician	9	12	(3)	75%
1749	Exodontist	40	22	18	182%
1750	Oral Surgeon	70	80	(10)	88%
1760	Periodontist	52	47	5	111%
1769	Prosthodontist	50	64	(14)	78%
1775	Pub Hlth Dentistry	8	7	1	114%
1780	Oral Pathology	9	8	1	113%
1785	Orofacial Pain	14	14	0	100%
1790	Dental Research	3	6	(3)	50%
1795	Pediatric Dentist	16	16	0	100%
	Subtotal DC Officers	929	1024	(95)	91%

1. Net (distributable) inventory extracts officers in training from the total inventory.

2. Billets authorized exclude transients, patients, prisoners, and holding (TPP&H) and include fair share distribution of billets coded as 2XXX, which can be filled by any medical department officer.

Table 35 provides the end December 2006 Medical Service Corps officer inventory versus FY07 billets authorized.

Table 35. Medical Service Corps (designator 230X) end December 2006 billet-body match

Subspecialty code	Subspecialty description	Net inventory	FY07 billets authorized	Delta billets to inventory	Percent manned
1800	Health Care Adm	485	492	(7)	98.6%
1801	Patient Admin	95	67	28	141.8%
1802 & 3121	Mat'l Logist Mgt	74	78	(4)	94.9%

Subspecialty code	Subspecialty description	Net inventory	FY07 billets authorized	Delta billets to inventory	Percent manned
1803 & 6201	Info Systems	28	34	(6)	82.4%
1804	Med Construct Liaison	22	18	4	122.2%
1805	Plans/Ops/Med Intelligence	99	151	(52)	65.6%
3111/12	Financial Mgt	79	91	(12)	86.8%
3130	MPTA	26	39	(13)	66.7%
3150	Educe & Tang Mgt	10	22	(12)	45.5%
3211	Operation Research	10	8	2	125.0%
HCA Subtotal		928	1022	(72)	90.8%
1810-11	Biochemistry	34	35	(1)	97.1%
1815-21	Microbiology	43	48	(5)	89.6%
1825/28	Radiation Health	63	69	(6)	91.3%
1835	Physiology	13	16	(3)	81.3%
1836	Aerospace Physiologist	80	73	7	109.6%
1840-43	Clinical Psych	90	122	(32)	73.8%
1844	Aerospace Exper Psych	28	31	(3)	90.3%
1845	Research Psych	17	21	(4)	81.0%
1850	Entomology	34	36	(2)	94.4%
1860	Environmental Hlth	73	86	(13)	84.9%
1861	Industrial Hygiene	111	115	(4)	96.5%
1862	Audiology	20	23	(3)	87.0%
1865	Medical Technology	78	77	1	101.3%
1870	Social Work	27	30	(3)	90.0%
1873	Physical Therapy	71	72	(1)	98.6%
1874	Occupation Therapy	19	21	(2)	90.5%
1876	Clinical Dietetics	35	35	0	100.0%
1880	Optometry	119	124	(5)	96.0%
1887/88	Pharmacy, General	112	128	(16)	87.5%
1892	Podiatry	18	22	(4)	81.8%
1893	Physician Assistant	199	200	(1)	99.5%
HCS subtotal		1284	1384	(100)	92.8%
Total MSC Officers		2212	2558	(214)	91.6%

1. Net (distributable) inventory extracts officers in training from the total inventory.
2. Billets authorized exclude transients, patients, prisoners, and holding (TPP&H) and include fair share distribution of billets coded as 2XXX, which can be filled by any medical department officer.

Table 36 provides the end December 2006 Nurse Corps officer inventory versus FY07 billets authorized.

Table 36. Nurse Corps (designator 290X) end December 2006 billet-body match

Subspecialty code	Subspecialty description	Net inventory	FY07 billets authorized	Delta billets to inventory	Percent manned
3130	MPTA	13	15	(2)	87%
3150	E & T Management	28	31	(3)	90%
1806	Healthcare Management	5	6	(1)	83%
1900	Professional Nursing	835	870	(35)	96%
1901	Nursing Administration	17	57	(40)	30%
1903	Nursing Ed	23	39	(16)	59%
1910	Medical/Surgical	505	462	43	109%
1920	Maternal Infant	197	142	55	139%
1922	Pediatric Nursing	41	44	(3)	93%
1930	Psychiatric Nursing	56	51	5	110%
1940	Community Health	21	44	(23)	48%
1945	ER/Trauma Nursing	167	165	2	101%
1950	Perioperative Nursing	256	285	(29)	90%
1960	Critical Care Nursing	187	339	(152)	55%
1964	NICU Nursing	24	29	(5)	83%
1972	Nurse Anesthesia	120	140	(20)	86%
1974	Pediatric NP	23	28	(5)	82%
1976	Family NP	52	68	(16)	76%
1980	Women's Health NP	20	13	7	154%
1981	Nurse Midwife	26	27	(1)	96%
	Healthcare Management				
1806D	PhD	0	1	(1)	0%
1900D	Nursing PhD	10	10	0	100%
1972D	CRNA PhD	5	4	1	125%
Total		2,631	2,870	(239)	92%

1. Net (distributable) inventory extracts officers in training from the total inventory.
2. Billets authorized exclude transients, patients, prisoners, and holding (TPP&H) and include fair share distribution of billets coded as 2XXX, which can be filled by any medical department officer.

Table 37 provides the end December 2006 Hospital Corpsmen inventory versus FY07 billets authorized.

Table 37. Hospital Corpsman end December 2006 billet-body match

Navy enlisted classification (NEC)	NEC description	Enlisted program authorization (EPA)	Inventory	Delta inventory to EPA	Percent inventory to EPA
HM-8404	Field medical service	6182	7178	996	116%
HM-8483	Operating room technician	1022	984	(38)	96%
HM-0000	General duty	9160	8299	(861)	91%
HM-8406	Aerospace medical technician	532	473	(59)	89%
HM-8402	Submarine force independent duty corpsman	1058	974	(84)	92%
HM-8407	Radiation health technician	93	113	20	122%
HM-8408	Cardiovascular technician	70	81	11	116%
HM-8416	Nuclear medicine technician	32	51	19	159%
HM-8425	Surface independent duty corpsman	1058	974	(84)	92%
HM-8432	Preventive medicine technician	702	675	(27)	96%
HM-8434	Hemodialysis technician	16	22	6	138%
HM-8463	Optician	208	202	(6)	97%
HM-8451	Basic X-ray technician	215	228	13	106%
HM-8452	Advanced X-ray technician	575	521	(54)	91%
HM-8454	Electroneurodiagnostic technician	25	39	14	156%
HM-8466	Physical therapy technician	212	221	9	104%
HM-8467	Occupational therapy technician	16	15	(1)	94%
HM-8472	Biomedical photography technician	34	24	(10)	71%
HM-8478	Advanced biomedical equipment technician	249	192	(57)	77%
HM-8479	Basic biomedical equipment systems technician	180	112	(68)	62%
HM-8482	Pharmacy technician	738	643	(95)	87%
HM-8489	Orthopedic cast room technician	140	163	23	116%
HM-8485	Psychiatric technician	327	364	37	111%
HM-8496	Mortician	16	15	(1)	94%
HM-8505	Cytotechnologist	36	41	5	114%
HM-8493	Medical deep sea diving technician	110	98	(12)	89%
HM-8494	Deep sea diving independent duty corpsman	87	72	(15)	83%
HM-8503	Histopathology technician	37	39	2	105%

Navy enlisted classification (NEC)	NEC description	Enlisted program authorization (EPA)	Inventory	Delta inventory to EPA	Percent inventory to EPA
HM-8506	Medical laboratory technician, advanced	1194	1180	(14)	99%
HM-8451	Respiratory therapy technician	144	137	(7)	95%
	Dental hygienists	95	86	(9)	91%
	Dental laboratory technician, basic	136	96	(40)	71%
	Dental assistants	1407	1172	(235)	83%
	Advanced Dental laboratory technician, advanced	125	87	(38)	70%

Table 38 provides the background and description of allowances and pay for OCONUS activities.

Table 38. Background description of OCONUS pay and allowances

Pay or allowance	Description	Periodicity	Legislative authority	Eligibility
Pay - post differential for especially adverse conditions.	An additional incentive of up to 15% above the normal 25% limit on a post allowance is allowed for an assignment to a post determined to have especially adverse conditions of environment.	Paid periodically or in lump sum	5 U.S.C. 5925(a)	Civilians
Post (cost of living) allowance	The PA is paid "to offset the difference between the cost of living at the post of assignment ... in a foreign area and the cost of living in the District of Columbia" 5 U.S.C. 5924(1). PA does not include the difference in the cost of housing. The amount may not exceed 25 percent of the rate of basic pay. This is computed using a multiplier from the location, number of dependents, and base pay.	Bi-weekly		Civilians
Quarters in lieu of LQA	An employee who is a citizen of the United States permanently stationed in a foreign country may be furnished, without cost to the employee, "living quarters, including heat, fuel, and light," in a government owned or rented building. Government provided quarters are typically not available to DOD civil servants overseas.	Non-applicable	5 U.S.C. 5923(a) (2).	Civilians

Pay or allowance	Description	Periodicity	Legislative authority	Eligibility
Living quarters allowance (L.O.A)	<p>“A living quarters allowance for rent, heat, light, fuel, gas, electricity and water” is provided when government-owned or rented quarters are not provided without charge to an employee in a foreign area. LQA is divided into Entitlement Groups. The lower the number of the group, the higher the maximum allowance. Each entitlement group is divided into employees with and without family member rates.</p> <p>a. Without family member rates - employees who are single or unaccompanied get this rate.</p> <p>b. Employees with 1 dependent (e.g., a spouse) at the overseas location qualify for the “with family” rate.</p> <p>c. Employees with 2-3 dependents receive an additional 10% above the “with family” rate.</p> <p>d. Employees with 4-5 dependents receive an additional 20% above the basic “with family” rate.</p> <p>e. Employees with 6 or more dependents receive an additional 30% above the “with family” rate.</p> <p>5. Limit on LQA. The maximum allowance or rate is the cap. LQA is the lesser of the cap or actual expenses.</p> <p>6. Initiation of LQA Payments.</p>	Monthly	6 U.S.C. 5923(a) (2).	Civilians
Education allowance	There is an extensive set of rules for an “education allowance or payment of travel costs” for “extraordinary and necessary expenses ... incurred ... in providing adequate education for ... dependents” of overseas employees.	Annually	5 U.S.C. 5924(a)	Civilians
Relocation allowance	For overseas moves, the Secretary of Defense may provide civilian employees, and members of their families, abroad with travel benefits comparable to benefits provided by the Secretary of State to members of the Foreign Service and their families abroad. This can include household goods storage, temporary quarters allowance, motor vehicle shipment, and other miscellaneous expenses. The member is obligated for a minimum of 2 years on station.	At time of the move	10 U.S.C. 1599b	Civilians, generally GS-9 or higher

Pay or allowance	Description	Periodicity	Legislative authority	Eligibility
Overseas housing allowance (OHA)	OHA compensates members for the majority of housing expenses. Comprises three components: rental ceiling, utility/recurring maintenance allowance, and move-in housing allowance (MIHA). Rental ceilings computed using actual rents as reported through finance centers. Rental ceiling set such that 80 % of members with dependents have rents fully reimbursed. Unaccompanied members or members without dependents entitled to 90% of with-dependent rate, 80% of total OHA payments.	Monthly	DoD Per Diem Committee	Military members residing off-base
Utility/recurring maintenance allowance	Updated annually through survey provided to individual members who receive the allowance.	Monthly	DoD Per Diem Committee	Military members residing off-base
Cost of living allowance	The Overseas Cost of Living Allowance is a supplement designed to equalize purchasing power between members overseas and their CONUS-based counterparts. The average supplement is \$300 per month. The basic measurement is a comparison of CONUS shopping behavior and the aggregate shopping behavior at each overseas location	Computed as a daily rate, but paid monthly	DoD Per Diem Committee	Military members residing off-base

Tables 39 and 40 are representative samples of the collateral duties and watches that extend the average active duty military member's work schedule beyond the normal 40-hour week. These duties will continue to be requirements, regardless of conversions, and will either be passed among fewer military or be performed by civilians detracting from their 40-hour production capacity.

Table 39. Representative list of military collateral duties

Collateral duty requirement

American Red Cross Program Coordinator

Command Audit Board

- Drugs

- Gold

- Command sponsored programs

- Patient Valuables

Auxiliary security force coordinator

Awards coordinator

Beneficiary counseling and assistance coordinator (BCAC)

Bio-hazardous/hazardous material medical waste coordinator

Blood bank medical officer

Casualty assistance calls officer (CACO)

Chemical, biological, radiological defense representative

Classified material custodian

Collection agent auditor

Command career counselor

Command contracting officer

Command customer representative

Command DAPA

Command evaluation officer

Command financial specialist

Command fire marshal

Command fitness coordinator

Command legal officer

Command managed equal opportunity (CMEQ) coordinator

Compliance officer

Contingency officer

Controlled substance custodian

Crisis response team

Debt collection assistance officer (DCAO)

Decedent affairs/morgue/mortuary affairs officers

Emergency management officer

EMT program manager

Energy conservation program manager

Equipment manager

Exceptional family member program manager

Family advocacy representative (FAR)

Collateral duty requirement

Family care plan coordinator
Fire warden
Fleet liaison representative
Force protection/anti-terrorism officer/training officer
Forms/reports manager
Funds custodian
Health care relations programs coordinator
HIV officer
HM Skills base program manager
IDC Program coordinator
Infection control surveillance officer
Information system security manager
Key custodian
Mail control officer
Management control review program coordinator
Non-combatant evacuation operations (NEO) officer
Overseas screening coordinator
PASS liaison representative
Patient valuables custodial officer
Physical security officer
Postal officer
Precious metal recovery program coordinator
Privacy officer
Professional affairs coordinator (PAC)
Public affairs officer
Recall coordinator
Records disposal officer
Reserve liaison officer
Security manager
Sponsorship coordinator
Urinalysis program manager
Victim and witness assistance manager
Voting assistance officer
Watch bill coordinators
Woman infant child (WIC) coordinator

Table 40. Representative list of military watch bills

Watch bills	Onboard requirement
Chief of the day	Yes
Command duty officer	Yes
Emergency Vehicle Operator	Yes
Flight line surgeon	Yes
Laboratory technician	Yes
Mate of the day	Yes
Medical officer of the day	Yes
Operating room technician (2)	Yes
Pharmacy technician	Yes
Radiology technician	Yes
Admin support	Yes
Biomedical repair technician	No
Collection agent	No
Dental technician and dentist	No
Dietician	No
Family advocacy program	No
Flight line master at arms	No
Master at arms	No
Aerovac coordinator	No
Medical logistics	No
Nurse of the day	Yes
OB/GYN surgeon	No
Optometrist	No
Orthopedic surgeon	No
Pediatrician	No
Sea air rescue program	No
Surgeon	No
Translator	No
SAVI	No
Duty driver	Yes

Table 41 presents the FY2006 military treatment facilities within their peer review group. The data include the average daily patient load (ADPL), average cost per outpatient visit, average inpatient expense per bed day, and the average full time equivalent (FTE) per patient bed day. The lower the FTE per bed day, the less expensive the inpatient care and, in theory, the more efficient the inpatient care.

Table 41. FY 2006 Inpatient treatment facilities sorted by size and inpatient expense to bed day

Category	Parent name	ADPL	Avg cost per outpatient visit	Inpatient expenses to bed day	Bed days to inpatient FTE
Large CONUS	MARTIN ACH-FT. BENNING	39	\$143	\$1,680	15
Large CONUS	MONCRIEF ACH-FT. JACKSON	13	\$193	\$1,964	13
Large CONUS	DARNALL AMC-FT. HOOD	62	\$182	\$2,151	12
Large CONUS	NH CAMP LEJEUNE	42	\$208	\$2,160	14
Large CONUS	BLANCHFIELD ACH-FT. CAMPBELL	33	\$188	\$2,170	14
Large OCONUS	NH OKINAWA	33	\$211	\$2,307	13
Large CONUS	L. WOOD ACH-FT. LEONARD WOOD	24	\$169	\$2,332	13
Large CONUS	1st MED GRP-LANGLEY	16	\$292	\$2,506	6
Large OCONUS	LANDSTUHL REGIONAL MEDCEN	81	\$260	\$2,522	14
Large CONUS	NH CAMP PENDLETON	31	\$271	\$2,563	11
Large CONUS	REYNOLDS ACH-FT. SILL	21	\$156	\$2,624	16
Large OCONUS	NH YOKOSUKA	12	\$262	\$2,671	8
Large CONUS	DEWITT ACH-FT. BELVOIR	18	\$274	\$2,679	7
Large CONUS	IRWIN ACH-FT. RILEY	13	\$186	\$2,684	15
Large CONUS	EVANS ACH-FT. CARSON	31	\$199	\$2,684	15
Large CONUS	WINN ACH-FT. STEWART	22	\$193	\$2,763	14
Large CONUS	NH JACKSONVILLE	32	\$198	\$2,849	10
Large OCONUS	121st GEN HOSP-SEOUL	21	\$251	\$2,967	13
Large CONUS	99th MED GRP-O'CALLAGHAN HOSP	19	\$331	\$3,208	7
Large OCONUS	NH GUAM-AGANA	16	\$354	\$3,532	11
Large CONUS	NH PENSACOLA	21	\$251	\$3,539	6
Large CONUS	89th MED GRP-ANDREWS	16	\$304	\$3,855	8
Large CONUS	96th MED GRP-EGLIN	15	\$348	\$3,887	8
Large CONUS	NH BREMERTON	18	\$313	\$3,888	7
Small CONUS	NH BEAUFORT	12	\$191	\$1,766	9
Small OCONUS	35th MED GRP-MISAWA	5	\$247	\$1,773	7
Small OCONUS	48th MED GRP-LAKENHEATH	12	\$244	\$1,996	8

Category	Parent name	ADPL	Avg cost per outpatient visit	Inpatient expenses to bed day	Bed days to inpatient FTE
Small OCONUS	NH GUANTANAMO BAY	3	\$627	\$2,019	9
Small CONUS	NH GREAT LAKES	5	\$189	\$2,459	12
Small CONUS	BASSETT ACH-FT. WAINWRIGHT	12	\$218	\$2,575	7
Small CONUS	10th MED GROUP-USAF ACADEMY CO	8	\$364	\$2,669	11
Small CONUS	NH CHERRY POINT	7	\$235	\$2,683	6
Small CONUS	NH OAK HARBOR	6	\$192	\$2,900	6
Small CONUS	BAYNE-JONES ACH-FT. POLK	11	\$205	\$2,934	10
Small CONUS	NH LEMOORE	5	\$251	\$2,989	6
Small CONUS	366th MED GRP-MOUNTAIN HOME	4	\$315	\$3,060	6
Small OCONUS	WUERZBURG MEDDAC	6	\$274	\$3,099	8
Small OCONUS	52nd MED GROUP-SPANGDAHLEM	4	\$415	\$3,140	5
Small CONUS	IRELAND ACH-FT. KNOX	10	\$193	\$3,282	8
Small OCONUS	31st MED GRP-AVIANO	4	\$376	\$3,404	5
Small CONUS	NH TWENTYNINE PALMS	7	\$314	\$3,416	4
Small CONUS	WEED ACH-FT. IRWIN	5	\$222	\$3,466	6
Small OCONUS	374th MED GRP-YOKOTA AB	4	\$361	\$3,822	5
Small OCONUS	NH NAPLES	3	\$440	\$4,335	4
Small OCONUS	HEIDELBERG MEDDAC	7	\$258	\$4,344	6
Small OCONUS	51st MED GRP-OSAN AB	1	\$386	\$4,404	4
Small OCONUS	NH SIGONELLA	3	\$412	\$4,676	4
Small CONUS	KELLER ACH-WEST POINT	6	\$251	\$4,740	7
Small CONUS	375th MED GRP-SCOTT	5	\$308	\$4,969	5
Small OCONUS	NH KEFLAVIK	1	\$267	\$5,603	3
Small CONUS	MCDONALD ACH-FT. EUSTIS	1	\$221	\$6,058	5
Small OCONUS	NH ROTA	3	\$403	\$7,143	4

Source: TRICARE Management Activity (TMA) Expense Assignment System (EAS IV) of February 2007

Table 42 provides the FY06 outpatient purchased care for Japan, Italy, and Spain. These data suggest potential areas where care can be purchased via an informal network and where it is not possible to purchase care. Additionally, the data suggest the limited amounts of care that may be available within the excess capacity of the host nations.

Table 42. FY06 Outpatient purchased care

Category Description	Data	Italy		Spain		Japan	
		All military	Navy	All military	Navy	All military	Navy
Burns	# of Visits	7	1	-	-	2	-
	Amount Paid	\$364	\$27	-	-	\$203	-
	Cost per visit	\$52	\$27			\$102	
Cardiovascular	# of Visits	207	46	52	5	179	16
	Amount Paid	\$63,315	\$19,884	\$20,222	\$2,321	\$33,491	\$7,705
	Cost per visit	\$306	\$432	\$389	\$464	\$187	\$482
Digestive	# of Visits	301	34	71	10	235	20
	Amount Paid	\$66,809	\$20,823	\$57,314	\$3,293	\$30,781	\$1,540
	Cost per visit	\$222	\$612	\$807	\$329	\$131	\$77
Endo&Metabolic	# of Visits	80	9	25	4	137	13
	Amount Paid	\$18,294	\$2,032	\$6,654	\$971	\$18,177	\$2,106
	Cost per visit	\$229	\$226	\$266	\$243	\$133	\$162
ENT	# of Visits	782	23	276	12	1129	101
	Amount Paid	\$99,816	\$4,243	\$77,914	\$6,414	\$66,665	\$6,380
	Cost per visit	\$128	\$184	\$282	\$535	\$59	\$63
Eye	# of Visits	164	17	21	2	940	336
	Amount Paid	\$21,359	\$3,190	\$2,007	\$305	\$79,531	\$29,966
	Cost per visit	\$130	\$188	\$96	\$152	\$85	\$89
Gynecology	# of Visits	92	45	63	3	1771	944
	Amount Paid	\$71,904	\$35,903	\$20,590	\$484	\$199,043	\$115,102
	Cost per visit	\$782	\$798	\$327	\$161	\$112	\$122
Hematology	# of Visits	42	1	11	-	29	-
	Amount Paid	\$4,299	\$194	\$2,271	-	\$1,807	-
	Cost per visit	\$102	\$194	\$206	-	\$62	-
Hepatic	# of Visits	15	4	4	3	30	7
	Amount Paid	\$11,200	\$9,630	\$6,642	\$5,944	\$8,321	\$5,063
	Cost per visit	\$747	\$2,407	\$1,660	\$1,981	\$277	\$723
Infectious Disease	# of Visits	181	10	132	10	140	15
	Amount Paid	\$11,790	\$1,180	\$16,728	\$945	\$10,904	\$2,089
	Cost per visit	\$65	\$118	\$127	\$95	\$78	\$139
Injuries/Poisonings	# of Visits	402	206	51	4	150	14
	Amount Paid	\$68,176.4	\$27,800.8	\$12,032.4	\$1,435.4	\$17,157.9	\$1,228.0
	Cost per visit	\$170	\$135	\$236	\$359	\$114	\$88
Male Repro	# of Visits	56	17	19	4	5	1
	Amount Paid	\$51,229	\$15,510	\$12,050	\$1,324	\$1,559	\$74

Category Description	Data	Italy		Spain		Japan	
		All military	Navy	All military	Navy	All military	Navy
Musculoskeletal	Cost per visit	\$915	\$912	\$634	\$331	\$312	\$74
	# of Visits	1989	1506	319	57	382	30
	Amount Paid	\$265,196	\$92,636	\$161,364	\$29,123	\$43,599	\$4,872
Nervous System	Cost per visit	\$133	\$62	\$506	\$511	\$114	\$162
	# of Visits	214	48	42	14	194	31
	Amount Paid	\$58,710	\$16,108	\$9,436	\$3,998	\$29,839	\$7,175
Newborn/Neonates	Cost per visit	\$274	\$336	\$225	\$286	\$154	\$231
	# of Visits	53	23	13	1	43	6
	Amount Paid	\$11,105	\$8,531	\$1,100	\$34	\$3,323	\$224
Obstetrics	Cost per visit	\$210	\$371	\$85	\$34	\$77	\$37
	# of Visits	196	26	52	8	215	21
	Amount Paid	\$139,554	\$25,936	\$46,542	\$5,661	\$17,532	\$2,018
Oncology	Cost per visit	\$712	\$998	\$895	\$708	\$82	\$96
	# of Visits	5	-	1	1	-	-
	Amount Paid	\$1,131	-	\$850	\$181	-	-
Psychiatry	Cost per visit	\$226	-	\$850	\$181	-	-
	# of Visits	536	40	24	11	178	65
	Amount Paid	\$71,777	\$22,807	\$2,704	\$1,105	\$21,599	\$5,742
Pulmonary	Cost per visit	\$134	\$570	\$113	\$100	\$121	\$88
	# of Visits	459	25	51	2	226	17
	Amount Paid	\$35,597	\$7,376	\$9,535	\$321	\$28,615	\$1,777
Renal	Cost per visit	\$78	\$295	\$187	\$160	\$127	\$105
	# of Visits	130	9	17	3	53	4
	Amount Paid	\$27,392	\$9,215	\$4,799	\$959	\$8,761	\$257
Skin & Soft Tissue	Cost per visit	\$211	\$1,024	\$282	\$320	\$165	\$64
	# of Visits	868	123	198	26	430	50
	Amount Paid	\$266,792	\$79,566	\$110,870	\$27,718	116336.74	14736.14
Substance Abuse	Cost per visit	\$307	\$647	\$560	\$1,066	\$271	\$295
	# of Visits	6	-	2	2	1	-
	Amount Paid	\$634	-	\$384	\$384	\$160	-
Unknown	Cost per visit	\$106	-	\$192	\$192	\$160	-
	# of Visits	2438	538	318	52	2048	373
	Amount Paid	\$316,688	\$133,655	\$58,205	\$13,436	\$150,314	\$26,443
Total Visits	# of Visits	9223	2750	1762	233	8517	2064
Total Amount Paid	Amount Paid	\$1,683,131	\$536,244	\$640,213	\$106,354	\$887,718	\$234,498
	Cost per visit	\$182	\$195	\$363	\$456	\$104	\$114

Source: Military Health System (MHS) Management Analysis Reporting Tool (M2)

Table 43 provides the FY06 inpatient purchased care for Japan, Italy, and Spain. These data suggest potential areas where care can be purchased via an informal network and where it is not possible to purchase care. Additionally, the data suggest the limited amounts of care that may be available within the excess capacity of the host nations. Of note is the downward trend in inpatient purchased care.

Table 43. Inpatient purchased care dollars

Country	Major diagnostic code	Data	Navy only		All military Services	
			2005	2006	2005	2006
Spain	Cardiovascular	# of admissions	1		5	2
		Amount billed	\$3,089		\$32,578	\$17,144
	Digestive	# of admissions	1		2	7
		Amount billed	\$264		\$3,119	\$27,058
	Endo&Metabolic	# of admissions			1	
		Amount billed			\$264	
ENT		# of admissions		1		5
		Amount billed		\$1,342		\$7,534
Gynecology		# of admissions	1		4	
		Amount billed	\$5,569		\$10,751	
Hematology		# of admissions				1
		Amount billed				\$3,444
Hepatic		# of admissions			1	1
		Amount billed			\$12,633	\$3,420
Infectious Disease		# of admissions	1		3	
		Amount billed	\$1,352		\$9,365	
Injuries/Poisonings		# of admissions			2	
		Amount billed			\$5,884	
Male Repro		# of admissions				1
		Amount billed				\$2,255
Musculoskeletal		# of admissions			10	5
		Amount billed			\$70,987	\$43,680
Nervous System		# of admissions			4	7
		Amount billed			\$11,822	\$46,344
Newborn/Neonates		# of admissions		1		2
		Amount billed		\$10,420		\$15,361
Obstetrics		# of admissions	2	2	5	9

Country	Major diagnostic code	Data	Navy only		All military Services	
			2005	2006	2005	2006
	Pulmonary	Amount billed	\$1,696	\$7,587	\$9,241	\$38,027
		# of admissions			2	
	Renal	Amount billed			\$4,545	
		# of admissions	1		3	
	Skin&Soft Tissue	Amount billed	\$2,927		\$11,566	
		# of admissions	9	2	14	5
	Unknown	Amount billed	\$17,159	\$3,708	\$27,586	\$9,257
		# of admissions	1		1	
	Spain Total	Amount billed	\$1,963		\$1,963	
		# of admissions	17	6	57	45
Spain Total	Amount billed	\$34,020	\$23,058	\$212,305	\$213,524	
	Average Cost/Admission	\$2,001	\$3,843	\$3,725	\$4,745	
Italy	Cardiovascular	# of admissions	12	6	25	20
		Amount billed	\$115,671	\$37,681	\$232,113	\$124,339
Digestive	# of admissions	11	8	13	14	
	Amount billed	\$25,510	\$12,226	\$34,360	\$31,237	
Endo&Metabolic	# of admissions	1		2		
	Amount billed	\$25,694		\$29,398		
ENT	# of admissions	7	1	8	2	
	Amount billed	\$11,412	\$1,592	\$15,573	\$4,991	
Eye	# of admissions			2		
	Amount billed			\$7,850		
Gynecology	# of admissions	2	2	4	3	
	Amount billed	\$2,711	\$19,633	\$15,042	\$32,281	
Hematology	# of admissions			2		
	Amount billed			\$26,157		
Hepatic	# of admissions		2	4	7	
	Amount billed		\$3,413	\$15,499	\$30,957	
Infectious Disease	# of admissions		1		2	
	Amount billed		\$341		\$2,317	
Injuries/Poisonings	# of admissions	15	4	17	4	
	Amount billed	\$70,250	\$5,390	\$72,746	\$5,390	
Male Repro	# of admissions	2	1	3	3	
	Amount billed	\$11,832	\$6,067	\$13,442	\$15,829	
Musculoskeletal	# of admissions	12	2	19	5	
	Amount billed	\$74,224	\$11,005	\$125,149	\$44,040	
Nervous System	# of admissions	6	3	7	5	
	Amount billed	\$25,768	\$12,248	\$27,656	\$16,834	

Country	Major diagnostic code	Data	Navy only		All military Services		
			2005	2006	2005	2006	
Italy	Newborn/Neonates	# of admissions	8	4	15	10	
		Amount billed	\$57,915	\$33,744	\$85,960	\$89,420	
	Obstetrics	# of admissions	39	21	48	27	
		Amount billed	\$156,714	\$48,409	\$214,490	\$73,907	
	Oncology	# of admissions			1	1	
		Amount billed			\$1,259	\$2,810	
	Psychiatry	# of admissions	5	8	7	9	
		Amount billed	\$9,311	\$26,337	\$11,776	\$28,022	
	Pulmonary	# of admissions	9	3	12	8	
		Amount billed	\$53,226	\$6,008	\$59,044	\$47,542	
	Renal	# of admissions	1	5	1	7	
		Amount billed	\$1,938	\$30,736	\$1,938	\$49,446	
	Skin&Soft Tissue	# of admissions	3	3	10	4	
		Amount billed	\$3,319	\$8,493	\$33,044	\$10,883	
	Italy Totals	# of admissions	133	74	200	131	
	Italy Totals	Amount billed	\$645,493	\$263,321	\$1,022,495	\$610,245	
	Average Cost/Admission		\$4,853	\$3,558	\$5,112	\$4,658	
	Japan	Burns	# of admissions				1
			Amount billed				\$6,891
Cardiovascular		# of admissions	7	1	33	9	
		Amount billed	\$75,354	\$1,137	\$377,929	\$45,532	
Digestive		# of admissions	3	2	27	15	
		Amount billed	\$11,010	\$2,962	\$74,117	\$73,020	
Endo&Metabolic		# of admissions	1		4	3	
		Amount billed	\$20,165		\$26,352	\$15,484	
ENT		# of admissions	3	2	15	10	
		Amount billed	\$8,715	\$1,707	\$74,336	\$42,728	
Eye		# of admissions	1		2		
		Amount billed	\$3,805		\$6,673		
Gynecology		# of admissions	1	3	10	8	
		Amount billed	\$6,002	\$5,757	\$32,324	\$33,849	
Hematology		# of admissions		2		3	
		Amount billed		\$2,749		\$5,577	
Hepatic		# of admissions	5	1	6	1	
		Amount billed	\$24,307	\$2,378	\$51,002	\$2,378	
Infectious Disease		# of admissions	3		6	2	
		Amount billed	\$5,707		\$10,188	\$5,871	
Injuries/Poisonings	# of admissions	3	2	10	2		

Country	Major diagnostic code	Data	Navy only		All military Services	
			2005	2006	2005	2006
		Amount billed	\$7,534	\$40,765	\$26,441	\$40,765
	Musculoskeletal	# of admissions	1	4	10	6
		Amount billed	\$4,082	\$28,135	\$101,127	\$53,181
	Nervous System	# of admissions	1	3	10	13
		Amount billed	\$678	\$30,340	\$74,743	\$160,282
	Newborn/Neonates	# of admissions	7	1	39	14
		Amount billed	\$237,493	\$640	\$380,119	\$43,474
	Obstetrics	# of admissions	54	19	251	177
		Amount billed	\$262,376	\$68,093	\$1,165,418	\$707,100
	Oncology	# of admissions		1	5	11
		Amount billed		\$1,576	\$33,997	\$13,332
	Psychiatry	# of admissions	1		14	8
		Amount billed	\$4,842		\$43,035	\$30,561
	Pulmonary	# of admissions	1	2	26	10
		Amount billed	\$2,801	\$5,450	\$111,544	\$37,879
	Renal	# of admissions	2	1	8	10
		Amount billed	\$4,406	\$2,952	\$20,058	\$38,510
	Skin&soft tissue	# of admissions	1		3	9
		Amount billed	\$4,195		\$14,839	\$21,184
	Unknown	# of admissions		1	3	2
		Amount billed		\$3,280	\$10,658	\$5,954
	Japan Total	# of Admissions	95	45	482	314
	Japan Total	Amount Billed	\$683,471	\$197,922	\$2,634,900	\$1,383,551
	Average Cost/Admission		\$7,194	\$4,398	\$5,467	\$4,406
Total all admissions			245	125	739	490
Total amount billed			\$1,362,984	\$484,301	\$3,869,700	\$2,207,320
Average Cost/Admission			\$5,563	\$3,874	\$5,236	\$4,505

Source: Military Health System (MHS) Management Analysis Reporting Tool (M2)

Table 44 provides the current Navy Early Development and Intervention Service staffing. It is provided as a reference for potential expansion of the current Army contract.

Table 44. Navy EDIS staffing as of January 2007

Facility	Position	Contract	GS	Local National	Military	Grand Total
Camp Zama/Atsugi	Clinical Psychologist				1	1
	Early Child Special Educator		1			1
	Occupational Therapist				1	1
	Office Services Assistant (OA)		1			1
	Physical Therapist				1	1
	Social Worker		1			1
	Speech-Language Pathologist		1			1
Camp Zama/Atsugi			4		3	7
Total Guam						
	Early Childhood Special Educator	1				1
	Occupational Therapist	1				1
	Pediatrician				1	1
	Physical Therapist	1				1
	Speech-Language Pathologist	1				1
Guam Total		4			1	5
Guantanamo Bay						
	Early Childhood Special Educator		1			1
Guantanamo Bay			1			1
Total Iwakuni						
	Audiologist				1	1
	Clinical and Child Psychologist				1	1
	Early Child Special Educator	1				1
	Occupational Therapist				1	1
	Office Services Assistant (OA)		1			1
	Physical Therapist				1	1
	Speech-Language Pathologist	1				1
Iwakuni Total		2	1		4	7
Misawa						
	Community Health Nurse		1			1
	Early Child Special Educator		1			1
	Occupational Therapist		1			1
	Office Services Assistant (OA)		1			1
	Physical Therapist				1	1
	Social Worker				1	1

Facility	Position	Contract	GS	Local National	Military	Grand Total
	Speech-Language Pathologist		1			1
Misawa Total			5		2	7
Naples	Child Clinical Psychologist		1			1
	Early Childhood Special Educator	1				1
	Occupational Therapist		1			1
	Physical Therapist		1			1
	Secretary		1			1
	Speech-Language Pathologist	1				1
Naples Total		2	4			6
Okinawa	Assistant Family Service Coordinator	3	2			5
	Audiologist				1	1
	Child Clinical Psychologist	2			1	3
	Child Psychiatrist				1	1
	Clerk			1		1
	Community Health Nurse		1			1
	Developmental Pediatrician				1	1
	Early Childhood Special Educator	3	1			4
	Intervention Support Assistant		1			1
	Occupational Therapist	3	4		2	9
	OT Assistant				2	2
	Physical Therapist	3	3		1	7
	Social Worker		4			4
	Speech-Language Pathologist	2	2			4
Okinawa Total		16	18	1	9	44
Rota	Child Clinical Psychologist		1			
	Speech-Language Pathologist	1				
	Occupational Therapist		1			
	Physical Therapist		1			
	Early Childhood Special Educator	1				
	Secretary		1			
Rota Total		2	4	0	0	6
Sasebo	Early Child Special Educator	1				1
	Office Services Assistant (OA)		1			1
	OT Technician (COTA)				1	1
	Social Worker				1	1
	Speech-Language Pathologist		1			1
Sasebo Total		1	2		2	5

Facility	Position	Contract	GS	Local National	Military	Grand Total
Sigonella	Child Clinical Psychologist		1			1
	Early Childhood Special Educator	1				1
	Occupational Therapist	1				1
	Physical Therapist		1			1
	Secretary			1		1
	Speech-Language Pathologist	1				1
Sigonella Total		3	2	1		6
Yokosuka	Clinical Child Psychologist				2	2
	Early Child Special Educator		1			1
	Occupational Therapist		1		1	2
	Office Services Assistant (OA)		2			2
	OT Technician (COTA)				1	1
	Physical Therapist				1	1
	Program Administrator		1			1
	Social Worker		1			1
	Speech-Language Pathologist		1			1
Yokosuka Total			7		5	12
Yokota	Early Child Special Educator		1			1
	Occupational Therapist		1		1	2
	Office Services Assistant (OA)		1			1
	Physical Therapist	1				1
	Social Worker		1			1
	Speech-Language Pathologist		1			1
Yokota Total		1	5		1	7
Grand Total		29	49	2	27	107

Source: Bureau of Medicine and Surgery, EDIS Project Office

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