

Chapter 18: Optimizing Use of Resources

Optimize Resources to Meet Needs

A brief review of the titles of preceding chapters in this CARES Plan brings into focus the complexity of realigning the capital assets of a health care system, and the inter-related nature of CARES components.

For example, there are multiple, overlapping considerations in planning to improve access, enhance ambulatory care, ensure the availability of inpatient services, and protect special disability programs. These elements of the CARES process are interwoven, influencing each other as well as the central issue of quality in caring for veterans. The inherent linkage of CARES elements further extends to avoiding duplicative facilities, supporting research and medical education, reducing vacant space, and virtually every other component discussed in the plan.

With all of these items simultaneously in play during the CARES process, with dynamic adjustments being made to maximize beneficial effects and minimize negative impact on other components, it was prudent to apply a unifying filter at the end of the process. This took the form of a review to ensure that CARES-driven actions would optimize the use of limited resources, while meeting future changes in workload demand. This chapter describes the “resource optimization” review and provides a summary assessment of how resources were optimized in the CARES process.

Managing Workload Economically

One criteria used in the development of CARES Market Plans was a consideration of the most economical method for managing workload through in-house, contract, joint ventures or sharing and the most economical way to manage the space for in-house workload through renovation, new construction, conversion of vacant space or enhanced use. Operating costs of underutilized and vacant space were to be reduced. One of the driving forces behind CARES was a General Accounting Office report indicating that VHA expends as much as \$1 million a day on underused or inefficient capital infrastructure¹.

Workload Demand

Table 18.1 shows the national projected changes in workload demand by CARES Category. Except for inpatient surgery, workload is increasing over the 20 years of the CARES planning horizon. The draft National CARES Plan describes how the increase in workload will be managed, focusing on the space and capital requirements through FY 2022.

¹ GAO Report available under References

**Table 18.1 Change in National Workload Demand 2001 through 2022
In Bed Days of Care and Visits**

Planning Category	FY 2001 Workload	FY 2012		FY 2022	
		Total Demand	% Change	Total Demand	% Change
Primary Care (Visits)	12,972,821	20,451,216	58%	17,211,299	33%
Specialty Care (Visits)	10,950,477	22,112,050	102%	19,657,531	80%
Mental Health (Visits)	7,621,946	10,091,975	32%	9,310,644	22%
Ancillary/Diagnostic (Visits)	14,756,388	25,952,483	76%	24,260,090	64%
Medicine (BDOC)	1,794,836	2,533,902	41%	2,036,878	13%
Surgery (BDOC)	821,656	949,937	16%	764,596	-7%
Psychiatry (BDOC)	1,599,750	2,130,950	33%	1,819,064	14%

Costs to Implement CARES Market Plans

Cost Minimization in Managing Workload

Planning guidance encouraged the VISNs to select the most viable options for meeting projected care demands. For managing workload, this was accomplished by selecting one of the following options: in-house, contracting, sharing and joint ventures, or a combination of these options. VISNs were provided through the IBM Market Template with a systematic tool to evaluate the costs of the options.

Initially, for CARES planning purposes, in-house workload costs were assumed to be equal to unit costs obtained from VHA's Decision Support System (DSS) database for each facility. During the review process, the methodology for measuring in-house costs was improved to allow for marginal costs to be used for marginal gaps in workload. Contracting costs were set equal to Medicare (provider and facility) costs in each county and were provided by CACI/Milliman (Appendix O).

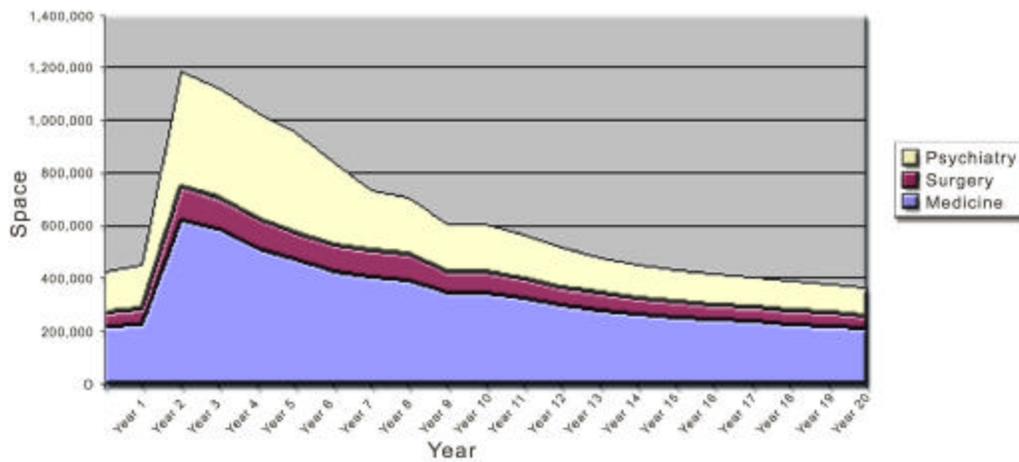
A basic assumption of the CARES planning model was that the cost of additional workload performed in-house would be equal to the associated DSS unit, variable, and indirect fixed costs, as appropriate, multiplied by the additional workload units. If workload was moved between facilities, savings at the transferring facility were calculated on the basis of these costs. Additional costs at the receiving facility were calculated using the same costing rules with the receiving facility's unit costs. There were no economies of scale assumed in the model. Any efficiencies resulting from reallocation of workload had to be estimated and entered into the model by the VISNs. Analysis of the cost of alternative options for the Planning Initiatives indicates that 60 percent of the options selected were the lower cost option. However, the cost of alternative options was based upon unit costing this will change when VISNs have the opportunity to re evaluate their selections prior to final approval of the plan.

Flexibility

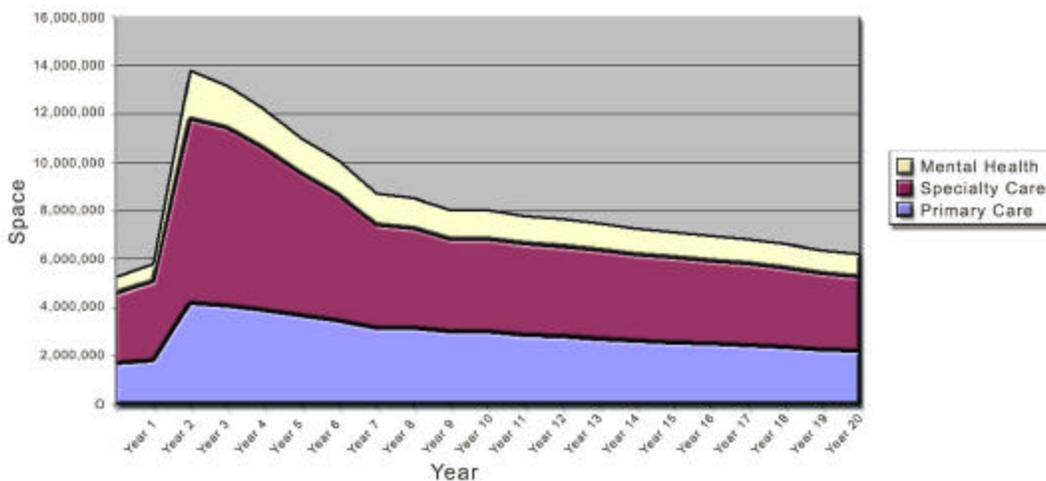
Utilization of resources is optimized when flexibility is maintained in the face of peak workload and variable workload. VISNs smoothed out variation in in-house workloads to avoid unnecessary fixed construction costs by the use of contracts. In general, VISN CARES Market Plans reflect increased utilization of contract care during periods of peak demand. The amount of care that would be contracted would then decline as workload fell to the point at which the VISNs were able to accommodate demand within their existing infrastructure. This is reflected in the two graphs below.

Figure 18.1 Forecasted Contract Workload FY 2002

Amount of Inpatient Care Contracted



Amount of Outpatient Care Contracted



Managing Space

Planning guidance encouraged the VISNs to select the most viable options for meeting space needs as projected by in-house workload demands. For managing space, this was accomplished by selecting one of the following options: new construction, leased space, conversion of vacant space, enhanced use and donated space or a combination of options. Existing space could be renovated to improve quality or functionality, but renovation alone could not expand the space.

Cost estimates for construction, renovation, demolition and lease were provided by VHA's Office of Facilities Management Professional Estimators. These regionally adjusted construction and lease costs were based on the condition and type of space to be renovated, the type of space to be constructed, the type of new construction or the type of space to be leased.

VISNS considered how they would meet the space needs associated with their planning initiatives, increasing workload and environment of care concerns. Market Plan solutions included acquisition of additional space, and improvement of existing space, through new construction, leasing, renovation, and enhanced use development.

Chapter 11 describes in detail the cost-effective solutions VISN developed to manage projected space needs.

Non-Recurring Costs to Manage Space

Based on the preferred space solutions selected by the VISNs for meeting in-house workload demand, Table 18.2 reflects a potential capital cost for the non-flatlined, clinical CARES Categories. These costs include new construction, renovation and build out costs for leases. This does not include recurring costs for leases.

Table 18.2 Total Capital Costs By Clinical CARES Categories Through 2012 In Current Dollars

CARES Category	Capital Costs in Current \$
Medicine	\$222,693,711
Ancillary/Diagnostic	\$678,354,996
Mental Health	\$264,906,059
Specialty Care	\$1,253,538,192
Primary Care	\$460,512,706
Psychiatry	\$221,496,568
Surgery	\$75,776,725
Total	\$3,177,278,957

Note: Costs in Table 18.2 include only the seven core clinical CARES categories, and therefore are a sub-set of the total capital estimates in Table 1.1.

VISN's tended to use lease space to accommodate in-house workload during periods of peak demand and new construction and conversion of space for sustained increases as shown in the chart below.

Table 18.3 Leased Space Through 2012

CARES Category	Leased Space in Square Feet
Medicine	177,381
Ancillary/Diagnostic	1,437,653
Mental Health	855,596
Specialty Care	3,606,576
Primary Care	2,536,801
Psychiatry	97,740
Surgery	25,300
National Totals	8,737,047

Vacant/Underutilized Space Savings:

Implementation of the VISN CARES Market Plans would reduce the amount of vacant/underutilized space by 42 percent, from 8,571,605 square feet in FY 2001 to 4,934,002 square feet in FY 2022. Vacant space totals do not include space that is out-leased to third parties.

Table 18.4 Reductions in Vacant/Underutilized Space In Square Feet

	FY 2001	FY 2022
Total Space	93,949,947	118,156,557
Vacant Space	8,571,605	4,934,002
% Vacant	9%	4%

Recurring cost associated with remaining vacant/underutilized space is estimated at \$167,553 daily².

² Derived from Total Recurring Cost of Vacant/Underutilized Space in current dollars

Savings associated with the reduction in vacant space are shown below. The reduction in vacant space described in Table 18.5 represents a minimum reduction since it does not include reductions in vacant space that will occur due to realignments of campuses and reuse of the campus through enhanced use leasing.

Table 18.5 Recurring Cost of Vacant/Underutilized Space through 2022
Costs are in Current Dollars

	FY 2001	FY 2022	Difference
Vacant/Underutilized Space in Square Feet (SF)	8,571,605 SF	4,934,002 SF	3,637,603 SF
Average Cost/SF to Maintain in Current \$ ³	\$12.39 per SF	\$12.39 per SF	--
Annual Cost (\$ per year)	\$106,245,044	\$61,156,955	\$45,088,089
Other Savings/Profits/Costs (\$ per year)*	--	\$15,493,381	--
Revised Annual Costs (\$ per year)	\$106,245,044	\$45,663,574	\$60,581,470
Cost per Day (\$ per day)	\$291,082	\$125,105	\$165,977

NOTE: *Other Savings/Profits/Costs related to the management of vacant space include such things as revenues from enhanced use lease initiatives, non-unit costs savings from building demolition, or revenues from sale of property. VISNs did not have a standardized way to enter these cost estimates so this dollar figure is not all inclusive of the potential savings from the management of vacant space.

Other Economic/Financial Considerations

A number of economic and financial considerations influenced a VISN's selection of how they would manage their future needs. Some of these considerations included:

- Feasibility of contracting in the community for services at Medicare rates;
- Projected availability of services in the community;
- Savings and efficiencies as a result of shifting services among sites;
- Efficiencies resulting from enhanced productivity by providing additional facilities, such as additional exam rooms for medical providers;
- Efficiencies resulting from joint ventures with affiliates and DoD through shared capital; and
- Revenues from enhanced use and shared services with affiliates, DoD and other entities.

Although 60 percent of the solutions selected by VISNs were the lower cost alternatives, in 40 percent of the solutions a VISN appeared to choose the more expensive alternative for solving a planning initiative or closing a capacity gap. Many times the least expensive alternative was not feasible or preferred for the reasons described

³ Cost provided by Professional Estimator in VHA Office of Facilities Management

above. In other cases, access and quality considerations prevented the VISN from choosing what appeared to be the least expensive alternative. In each case where VISNs did not choose the least expensive alternative, they provided rationales in their narratives on cost savings and optimizing resources.

While in many cases VISNs were able to develop cost estimates of the factors described above that would make one alternative more costly than another and incorporate them into their decision-making, many times these factors were difficult to estimate. Factors such as the availability of contract services in a community were difficult to quantify in the IBM planning software, and decisions to choose a more costly alternative were explained in the narrative portion of their market plans. More extensive analyses will take place as the CARES plans are implemented and these estimates will be improved.