

## E. OPTIONS FROM 1999 STUDY

### E.1 INTRODUCTION

The purpose of this paper is to provide the summary results of the analysis conducted by the Booz·Allen & Hamilton CARES Team in which the six options presented in the "VISN 12 Delivery System Option Study", were evaluated against the CARES Absolute Criteria. The Absolute Criteria are threshold criteria that options must pass through in order to be evaluated further by VA. The two areas of the Absolute Criteria that were used for this evaluation are Healthcare Needs and Requirements, and Safety and Suitable Environment.<sup>1</sup> In the first area, Healthcare Needs and Requirements, bed capacity is analyzed to determine whether the levels projected in the original study were valid. Validity was based on the comparison of the bed levels presented in the original study with bed levels projected by CARES projected demand data, using the same distribution methodology contained in the original study. For the second, Safety and Suitable Environment, the Team evaluated the existing VISN 12 facility portfolio using a set methodology and applying the CARES data to the six options to determine where issues may develop. The methodology used involved the analysis of data and assessing the impact of options on facilities, using current codes and standards. Data were compiled and analyzed from several sources, including, but not limited to, *Joint Commission on Accreditation of Healthcare Organizations (JCAHO)*, *Guidelines for Design and Construction of Hospital and Health Care Facilities (1996-1997, VA Handbook 7610)*, and *ADA Accessibility Guidelines for Building and Facilities (ADAAG)*. As a result of the analysis there is significant impact on capacity of current facilities. Generally, capacity is reduced when current standards of privacy and accessibility are applied. The results of the evaluation are summarized in the following sections.

### E.2 ABSOLUTE CRITERIA: HEALTHCARE NEEDS AND REQUIREMENTS

#### E.2.1 Analysis

The BA&H CARES Team evaluated the six options provided in the "VISN 12 Delivery System Options Study" of July 27,1999. The first step in evaluating the options was to validate the study demand projections. This was accomplished by using the CARES demand data to distribute workload, option by option, using the same distribution methodology outlined in the original options. A "facility-based" distribution was used rather than a market-based distribution to ensure consistency in the comparison of projected demand. The next step was to compare the original study options workload distribution (using original study demand projections) with the workload distribution completed in the first step (using the CARES process demand projections). We then analyzed the differences to determine whether the original options study provided sufficient capacity (beds) for each option.

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<sup>1</sup> *The third component of the Absolute Criteria, the Clinical Inventory, was not included as part of this analysis. While the Clinical Inventory is useful as a "checklist" of service components planned for an option, it has no workload or bed levels (the key space and capacity drivers used in this analysis) associated with it.*

We found the total number of beds provided in original study (1,848) to be significantly lower than the number projected for the CARES Study (2,240). This gap in beds translated to the service level where we found that the original study be projections did not provided a sufficient number of beds in many bed sections when compared to CARES demand projections. The results are summarized below. Detailed information is provided in the attachment to this appendix.

## E.2.2 Results Overview

In each of the six options presented, the bed capacity projected in the original study falls short of bed capacity projected when the CARES data are used. This indicates that the capacity requirements are not met when the absolute criteria for "Health Care Needs and Requirements" are applied to the original study options. For this reason, the original study options fail this criteria.

### ***Option #1***

Overall, the bed projections planned for the Chicago facilities in this option provide insufficient capacity when compared with projections based on CARES data. The following bed projections, by service, are significantly below projected capacity:

	Original Study Beds	CARES Study Beds
Surgery	64	105
Extended Care	644	790
RRTP	85	99
SCI	36	68
Blind Rehab	27	34

Similar results were found for the Wisconsin facilities (excluding Tomah and Iron Mountain which were not part of the study). The following services were found to be lacking sufficient capacity:

	Original Study Beds	CARES Study Beds
Acute Med Surg	153	207
Acute Psychiatry	13	55
RRTP	2	9
SCI	25	38

**Option #2**

For the Chicago facilities, capacity planned under the original study was not sufficient for most service categories:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	420	541
Extended Care	644	790
RRTP	85	99
SCI	36	68
Blind Rehab	27	34

Similarly, the projected bed capacity for several beds sections were not adequate when compared to the bed projections based on CARES demand data, for the Wisconsin facilities (excluding Tomah and Iron Mountain):

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	153	208
RRTP	2	9
SCI	25	38

**Option #3**

In this option the bed projections for several beds sections in the Chicago facilities provide less capacity than the level projected using CARES demand data, as follows:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	420	541
Acute Psychiatry	56	197
Extended Care	644	790
RRTP	85	99
SCI	36	68
Blind Rehab	27	34

The same results were found for the Wisconsin facilities, which demonstrate a shortage of projected beds when compared with the CARES bed projections:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	153	208
RRTP	2	9
SCI	25	38

#### **Option #4**

Overall, the bed projections planned for the Chicago facilities in this option provide insufficient capacity when compared with projections based on CARES data. The following bed projections, by service, are significantly below projected capacity:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	422	544
Extended Care	668	739
RRTP	85	99
SCI	36	68
Blind Rehab	27	34

Similarly, the projected bed capacity for several beds sections were not adequate when compared to the bed projections based on CARES demand data, for the Wisconsin facilities (excluding Tomah and Iron Mountain):

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	151	204
RRTP	2	9
SCI	25	38

#### **Option #5**

For the Chicago facilities, capacity planned under the original study was not sufficient for most service categories:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	422	543
Extended Care	668	739
RRTP	85	99
SCI*		
Blind Rehabilitation	27	34

\* In this option, SCI beds are consolidated at the Milwaukee VAMC

For the Wisconsin facilities, capacity planned under the original study also was not sufficient for most service categories when compared to the bed capacity projected by the CARES study:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	151	204
RRTP	2	9
SCI	61	106

### **Option #6**

In the last option, number 6, the following bed sections were found to have overall less than sufficient capacity for the Chicago facilities:

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	422	545
Extended Care	668	739
RRTP	85	99
SCI	36	68
Blind Rehab	27	34

Similarly, the projected bed capacity for several beds sections were not adequate when compared to the bed projections based on CARES demand data, for the Wisconsin Facilities (excluding Tomah and Iron Mountain):

	Original Study Beds	CARES Study Beds
Acute Med/Surg/Psych	151	204
RRTP	2	9
SCI	25	38

### **E.2.3 Summary**

In each of the six options presented, the bed capacity projected in the original study falls short of bed capacity projected when the CARES data are used. This indicates that the capacity requirements are not met when the absolute criteria for "Health Care Needs and Requirements" are applied to the original study options. For this reason, the original study options fail this criteria.

## **E.3 ABSOLUTE CRITERIA: FACILITY SAFE AND SUITABLE ENVIRONMENT**

### **E.3.1 Analysis**

The facility team evaluated the options as described in the 1999 study. No attempt was made to alter or adjust the options if a requirement was not met. This approach was taken because VA exercised the option provided in the CARES contract which allowed them to direct the contractor either to prepare additional data for the original options or develop new options. The guidance from VA to the BA&H CARES team was for BA&H to focus its efforts on developing new options rather than "fixing" options presented in the original study. Thus, while the new options will ensure consistency with the service delivery options requirements and associated capital realignment plans outlined for Phases 2 and 3 in the statement of work, no plans for adjustments or corrections were considered for the original study options. Rather, an assessment of the ramifications of the CARES projections for demand on the feasibility of the original options was conducted.

The methodology used for analyzing the original study options for the Absolute Criteria was based on a number of references including but not limited to the *Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Guidelines for Design and Construction of Hospital and Health Care Facilities (1996-1997)*, *VA Handbook 7610*, and *ADA Accessibility Guidelines for Building and Facilities (ADAAG)*. A Program for Design (PFD) was also created to check space requirements. The methodology set the standard for the level of care that each facility was evaluated against. Using Inpatient as an example, each facility was evaluated using the methodology and a maximum possible bed number was estimated. When a facility bed count was in question due to less than ideal physical configuration, test to fit plan options were generated. The test to fit plans worked within the physical configuration of the original plans and gave a realistic look at how bed space could be configured.

When in question it was assumed that the six options required the needed support space related to a function. For example, given a required acute care bed count, an associated number of critical care unit (CCU) beds are needed. Each facility was evaluated for that number of CCU beds. If it was determined that the facility could not meet that number due to lack of existing CCU space or substandard configuration, additional space was searched for. If the total space requirement for an option was exceeded or if the right location or configuration of space did not allow for new CCU areas, then a red flag was raised for that option. In other words if a facility option did not meet the methodology requirements and could not physically contain the option requirements then a red flag was raised.

The following summary provides an outline of the evaluation of each of the six options as described in the VISN 12 Delivery System Option Study dated 07/27/99 in the area of where they fail. Full details of the absolute criteria analysis are provided in the attachment to this appendix.

### E.3.2 Results Overview

Based on the barriers to implementation presented above, we find that each of the options presented fail the Absolute Criteria based on issues related to suitable environment and functionality. In most cases the proposed bed level space requirements either exceed existing space, or there is insufficient space to provide supporting functions such as ICUs or diagnostic services and treatment rooms. Based on these findings, these options present impractical solutions and warrant no further evaluation or analysis given the CARES process and criteria. A summary of findings will be included in the final CARES Study report in Volume II.

#### **Option #1**

- **VACHCS – Lakeside.** Based on the bed requirements provided for the Lakeside facility by market driven capacity needs, it was determined that 52 ICU beds are required. Currently the facility has a total of 18 ICU beds. Two additional existing ICU beds are marginal as they do not meet the ICU bed requirement of visual access to the outside environment as stated in *Guidelines for Design and Construction of Hospital and Health Care Facilities (1996-1997)*. While not stated in the original report, it is possible that new ICU space could be located in space vacated by services removed from the facility under this option. In this case, 6 additional ICU beds may be possible in renovated space on the third floor east. In addition, 11 more ICU beds may be possible in renovated space on second floor west if the current cardiac catheterization is relocated, possibly to the current imaging space on the second floor and/or if the service is captured from the affiliated University. Even if these renovations are possible, the facility will have a shortage of 17 ICU beds.

The Lakeside facility also requires 2 intervention radiographic procedure rooms on the second or third floors where needed to meet adjacency requirements. In addition, the current Surgical Suite does not have the space required for 4 general operating rooms, a laser eye room, and the addition of cardiovascular, neurological and orthopedic rooms at 600 SF minimum clear floor area as outlined in the *Design and Construction of Hospital and Health Care Facilities (1996-1997)*. There is also insufficient space to enlarge recovery to meet the new mission.

- **Hines.** Based on market driven capacity needs, it was determined that 512 nursing home care beds are required under this option. According to the methodology used in this study and stated above, it was estimated that 268 nursing home care beds are possible at the facility leaving a shortage of 244 beds. This estimate was made after the current facility was evaluated and configured for the current level of care for nursing home care beds as outlined in the Methodology. The option also requires that Hines contain 252 domiciliary beds and 59 PR RTP beds. Given the total facility bed count possible at Hines (901 beds), there are not enough beds possible to meet this requirement.

**Option #2**

- **Hines.** Based on market driven capacity need projections, 504 nursing home care beds are required. Using our methodology, 268 nursing home care beds are possible resulting in a shortage of 236 nursing home care beds. The option also requires the addition of 252 domiciliary beds and 59 PR RTP beds. Currently Hines does not contain any domiciliary beds. The facility plans were reviewed for additional areas where nursing home care beds and domiciliary beds might be placed, but due to the total shortage, the bed demand could not be met.
- **Milwaukee.** At Milwaukee, the market driven capacity need projections require 92 nursing home care beds. After review of the existing facility, based on the methodology, 80 nursing home care beds were possible. There is a shortage of 12 nursing home care beds. While the number for required nursing home care beds is close to the possible, the architects have concerns that there will not be enough square footage to meet the bed number and allow for needed support space. The facility was reviewed for possible locations of additional beds but based on the total facility bed need and configuration of existing buildings, no additional space for nursing home care beds could be located. While Milwaukee has a number of vacant or underutilized structures, their age and configuration does not make it practical for renovation into nursing home care bed space. Many vacant buildings may be more appropriately renovated as administrative areas but their configuration is inappropriate to meet the requirements of nursing care units.

**Option #3**

- **Hines.** Again, as in Option #2, due to the market driven capacity projections, 504 nursing home care beds are required. Only 268 nursing home care beds are possible resulting in a shortage of 236 nursing home care beds. The option also requires addition of 252 domiciliary beds. As mentioned before, Hines does not contain any domiciliary beds. The facility plans were reviewed for additional areas where nursing home care beds and domiciliary beds might be placed, but due to the total shortage, the bed demand could not be met.
- **Milwaukee.** Similar to Option #2, Milwaukee's market driven capacity need projections require 92 nursing home care beds. With 80 nursing home care beds possible, there is a shortage of 12 nursing home care beds. With a facility total of 602 beds required and a total of 610 provided, this option just meets capacity. The architects have concerns that the facility may be short of required support space.
- **VACHCS – West Side.** Based on the market driven capacity, West Side has a total medical/surgical bed requirement of 156 beds. Of that number, 22 are ICU beds. Based on requirements for ICU beds, 16 ICU beds are provided. This creates a shortage of 6 ICU beds. While the maximum facility bed requirement of 196 total beds is slightly under the total possible bed count of 201 beds, the architects have concerns that the facility is

short of required support space as well as appropriately configured space for specialty units such as ICU.

#### **Option #4**

- **VACHCS – West Side.** Under this option, the market driven capacity at West Side for medical and surgical beds is 143. Of that number, 22 are ICU beds. Based on requirements for ICU beds, 16 ICU beds are provided. There is a shortage of 6 ICU beds. The total facility bed requirement, including 81 acute mental health and 59 residential rehabilitation, is 283 beds. With only 201 beds possible, there is insufficient space for the bed requirement.

#### **Option #5**

- **Milwaukee.** Milwaukee’s market driven capacity projections require 106 SCI beds. Currently, the facility has 38 SCI beds. At a shortage of 68 beds, there is insufficient space in the facility. In addition, the SCI unit does not appear to have been originally designed as a SCI unit. Currently it contains substandard bowel management facilities and contains patient privacy issues.

The market driven capacity need projection requires 110 nursing home care beds. After review of the existing facility, based on the methodology, 80 nursing home care beds were possible. There is a shortage of 30 nursing home care beds. The facility was reviewed for possible locations of additional beds, but based on the total facility bed need and configuration of existing buildings, no additional space for nursing home care beds could be located. While Milwaukee has a number of vacant or underutilized structures, their age and configuration does not make it practical for renovation into nursing home care bed space. Many vacant buildings may be more appropriately renovated as administrative areas but their configuration is inappropriate to meet the requirements of nursing care units.

- **North Chicago.** The market driven capacity for nursing home care is 486 beds. With 188 nursing home care beds possible<sup>2</sup>, there is a shortage of 298 nursing home care beds in this option. In addition, the requirement for blind rehabilitation is 34 beds. Currently there are no blind rehabilitation beds at the facility. With the total required facility capacity of 893 beds and the possible bed capacity of 582 beds, there is a substantial shortage of beds in this option.

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<sup>2</sup> When analyzing the Original Study options, the 188 bed capacity is the space available in the NHCU, which was the space used to evaluate fit. We did not attempt to resolve the fit issue by identifying space in other areas of the facility to house these beds. However, even if other space could be identified, there is not sufficient capacity at this facility to house the number of beds provided by this option.

**Option #6**

- **Milwaukee.** Milwaukee's market driven capacity projections requires 204 acute care beds. With 114 acute care beds possible, there is a substantial shortage of 90 beds. With a total required facility bed count of 649, and a total possible bed count of 610, there is a shortage of beds in this option.
- **North Chicago.** The market driven capacity for nursing home care is 248 beds. With 188 nursing home care beds possible, there is a shortage of 60 nursing home care beds in this option. In addition, the requirement for long term psychiatry is 67 beds. With 26 beds possible, there is a shortage of 41 long-term psychiatry beds. With the total required facility capacity of 621 beds and the possible bed capacity of 582 beds, there is a substantial shortage of beds in this option.

**E.4 SUMMARY**

Based on the barriers to implementation presented above, we find that each of the options presented above fail the Absolute Criteria based on issues related to suitable environment and functionality. In most cases the proposed bed level space requirements either exceed existing space, or there is insufficient space to provide supporting functions such as ICUs or diagnostic services and treatment rooms. Based on these findings, these options present impractical solutions and warrant no further evaluation or analysis given the CARES process and criteria. A summary of findings will be included in the final CARES Study report in Volume II.

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 1**

Service	Lakeside			West Side			Hines			North Chicago		Madison			Milwaukee				
	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	BDOC	Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds		
<b>Medical</b>	74150	239	285						15	<b>CLOSED</b>		8687	28	42	18925	61	60		
<b>Surgical</b>	32576	105	64									6205	20	16	13651	44	22		
<b>Mental Health</b>																			
Acute							60809	196	56			5585	18	5	11479	37	8		
Res. Rehab.				13140	40	41	19382	59	44			2957	9	2					
<b>Extended Care</b>																			
NHCU							155709	474	337						30222	92	121		
DOM							82782	252	137						107420	327	326		
Psych							21024	64	170						986	3	9		
<b>SCI</b>																			
SCI							21097	68	36						11790	38	25		
SCI RCF							9855	30											
<b>Blind Rehab</b>							11169	34	27										
<b>TOTAL</b>	106726	344	349	13140	40	41	381827	1177	822					23433	75	65	194472	602	571

Source: VA actuary projections; VHA workload data; BA&H analysis

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 1 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg</u>. Overall sufficient capacity, 461 vs. 345 needed beds. Less than sufficient surgical beds, 64 vs. 105 medical beds.</li> <li>• <u>Extended Care</u>. Overall less than sufficient capacity, 644 vs. 790 needed beds. Less than sufficient capacity in NHCU, 337 vs. 474 needed beds. Less than sufficient capacity in Dom, 137 vs. 252 needed beds.</li> <li>• <u>RRTP</u>. Less than sufficient capacity, 85 vs. 99 needed beds.</li> <li>• <u>SCI</u>. Less than sufficient capacity, 36 vs. 68 legislated beds.</li> <li>• <u>Blind Rehab</u>. Less than sufficient legislated capacity, 27 vs. 34 needed beds.</li> </ul>				
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg</u>. Overall acute med/surg/psych less than sufficient capacity, 153 vs. 207 needed beds. Less than sufficient capacity in surgery, 38 vs. 64 needed beds. Less than sufficient capacity in acute psychiatry, 13 vs. 55.</li> <li>• <u>Extended Care</u>. Overall, sufficient capacity at 456 vs. 422 needed beds.</li> <li>• <u>RRTP</u>. Less than sufficient capacity, 2 vs. 9 needed beds.</li> <li>• <u>SCI</u>. Less than sufficient capacity; 25 vs. 38 legislated beds.</li> </ul>				
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>					
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• To fulfil the mission in this option, VACHCS Lakeside needs 45 to 54* ICU beds. Currently 18 ICU beds exist. Another 6* ICU beds may be possible in renovated space on 3 east and 11* ICU beds may be possible in renovated space on 2 west if Cardiac Catherization is relocated. This still leaves a shortfall of 10 to 19 ICU beds. Due to the requirement for visual access to the outside environment, limiting ICU configuration along the exterior wall of the building, there is no additional space available. In addition there is no available space for 2 Intervention Radiographic Procedure rooms on the 2<sup>nd</sup> or 3<sup>rd</sup> floors (where required) and insufficient space for 4 General Operating Rooms, a Laser Eye room, and Cardiovascular, Neurological, Orthopedic rooms at 600* SF minimum clear area. There is also insufficient space to enlarge recovery to meet the new mission.</li> <li>• In this option Hines requires 504 Nursing Home Care beds, including 30 Long Term SCI beds. 268* Nursing Home Care beds are possible, including the building capacity for 40 Long Term SCI beds. 252 Dom. beds and 59 PR RTP beds are required. There is a shortfall in the total facility bed count to meet programmed bed needs.</li> </ul> <p>* Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, Guidelines for Design and Construction of Hospital and Health Care Facilities, and ADA Accessibility Guidelines for Building and Facilities (ADAAG), unless noted otherwise.</p>					

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 2**

Service	Lakeside			West Side			Hines			North Chicago		Madison			Milwaukee			
	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	BDOC	Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	
<b>Medical</b>	33179	107	151				41263	133	<b>149</b>	<b>CLOSED</b>		8687	28	42	18925	61	60	
<b>Surgical</b>	13031	42	27				19546	63	37			6205	20	16	13651	44	22	
<b>Mental Health</b>																		
Acute							60809	196	56			5585	18	5	11479	37	8	
Res. Rehab.				13140	40	41	19382	59	44			2957	9	2				
<b>Extended Care</b>																		
NHCU							155709	474	337						30222	92	121	
DOM							82782	252	137						107420	327	326	
Psych							21024	64	170						986	3	9	
<b>SCI</b>																		
SCI							21097	68	36						11790	38	25	
SCI RCF							9855	30										
<b>Blind Rehab</b>							11169	34	27									
<b>TOTAL</b>	46227	149	178	13140	40	41	442636	1373	993				23433	75	65	194472	602	571

Source: VA actuary projections; VHA workload data; BA&H analysis

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 2 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 420 vs. 541 needed beds. Less than sufficient surgical capacity, 64 vs. 105 needed beds.</li> <li>• <u>Extended Care.</u> Overall, less than sufficient capacity, 644 vs. 790 needed beds. Less than sufficient capacity in NHCU, 337 vs. 474 needed beds. Less than sufficient capacity in Dom, 137 vs. 252 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 85 vs. 99 beds needed.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 36 vs. 68 legislative beds.</li> <li>• <u>Blind Rehab.</u> Less than sufficient capacity, 27 vs. 34 legislative beds.</li> </ul>		
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 153 vs. 208 needed beds. Less than sufficient surgical capacity, 38 vs. 64 needed beds.</li> <li>• <u>Extended Care.</u> Overall sufficient capacity, 456 vs. 422 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 2 vs. 9. beds needed.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 25 vs. 38 legislative beds.</li> </ul>		
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>			
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
<ul style="list-style-type: none"> <li>• In this option Milwaukee requires 92 NHCU beds. 80* NHCU beds are possible. This creates a shortfall of 12 NHCU beds. There is insufficient space to meet the programmed bed requirement.</li> <li>• In this option Hines requires 504 Nursing Home Care beds, including 30 Long Term SCI beds. 268* Nursing Home Care beds are possible, including the building capacity for 40 Long Term SCI beds. In addition 252 Domiciliary beds are required. There is a shortfall in total facility bed count to meet the programmed bed needs.</li> <li>• To fulfil the mission in this option, VACHCS Lakeside needs 22* ICU beds. Currently 18 ICU beds exist. Another 6 ICU beds may be possible in renovated space on 3 east and 11 ICU beds may be possible in renovated space on 2 west if Cardiac Catherization is relocated.</li> </ul> <p>* <i>Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, <u>Guidelines for Design and Construction of Hospital and Health Care Facilities</u>, and <u>ADA Accessibility Guidelines for Building and Facilities (ADAAG)</u>, unless noted otherwise.</i></p>			

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 3**

Service	Lakeside			West Side			Hines			North Chicago		Madison			Milwaukee		
	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	BDOC	Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds
<b>Medical</b>	<b>CLOSED</b>			35369	114	159	38781	125	141	<b>CLOSED</b>		8687	28	42	18925	61	60
<b>Surgical</b>				13031	42	29	19546	63	35			6205	20	16	13651	44	22
<b>Mental Health</b>																	
Acute							60809	196	56			5585	18	5	11479	37	8
Res. Rehab.				13140	40	41	19382	59	44			2957	9	2			
<b>Extended Care</b>																	
NHCU							155709	474	337						30222	92	121
DOM							82782	252	137						107420	327	326
Psych							21024	64	170						986	3	9
<b>SCI</b>																	
SCI							21097	68	36						11790	38	25
SCI RCF							9855	30									
<b>Blind Rehab</b>							11169	34	27								
<b>TOTAL</b>							61539	196	229			440154	1365	983			23433

Source: VA actuary projections; VHA workload data; BA&H analysis

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 3 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg</u>. Overall less than sufficient capacity, 420 vs. 541 needed beds. Less than sufficient surgical capacity, 64 vs. 105 needed beds. Less than sufficient acute mental health, 56 vs. 197 needed beds.</li> <li>• <u>Extended Care</u>. Overall, less than sufficient capacity, 644 vs. 790 needed beds. Less than sufficient capacity in NHCU, 337 vs. 474 needed beds. Less than sufficient capacity in Dom, 137 vs. 252 beds.</li> <li>• <u>RRTP</u>. Less than sufficient capacity, 85 vs. 99 needed beds.</li> <li>• <u>SCI</u>. Less than sufficient capacity, 36 vs. 68 legislative beds.</li> <li>• <u>Blind Rehab</u>. Less than sufficient capacity, 27 vs. 34 legislative beds.</li> </ul>				
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg</u>. Overall, sufficient capacity, 153 vs. 208 needed beds. Less than sufficient surgical capacity, 38 vs. 64 needed beds.</li> <li>• <u>Extended Care</u>. Overall, sufficient capacity at 456 vs. 422 needed beds.</li> <li>• <u>RRTP</u>. Less than sufficient capacity, 2 vs. 9 beds needed.</li> <li>• <u>SCI</u>. Less than sufficient capacity, 25 vs. 38 legislative beds.</li> </ul>				
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>					
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option Milwaukee requires 92 NHCU beds. 80* NHCU beds are possible. This creates a shortfall of 12 NHCU beds. There is insufficient space to meet the programmed bed requirement.</li> <li>• To fulfil the mission in this option, VACHCS West Side requires 22* ICU beds. Currently 16 ICU beds exist.</li> <li>• In this option Hines requires 504 Nursing Home Care beds, including 30 Long Term SCI beds. 268* Nursing Home Care beds are possible, including the building capacity for 40 Long Term SCI beds. In addition 252 Domiciliary beds are required. There is a shortfall in the total facility bed count to meet the programmed bed needs. In addition 31 ICU beds are required. Currently 26* ICU beds are possible.</li> </ul> <p>* Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, <u>Guidelines for Design and Construction of Hospital and Health Care Facilities</u>, and <u>ADA Accessibility Guidelines for Building and Facilities (ADAAG)</u>, unless noted otherwise.</p>					

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 4**

Service	Lakeside		West Side			Hines*			North Chicago			Madison			Milwaukee				
	Cares BDOC	Cares Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds		
<b>Medical</b>	<b>CLOSED</b>		31646	102	155	36299	117	124	6205	20	22	8687	28	42	18615	60	59		
<b>Surgical</b>			12720	41	29	19236	62	35	621	2		6205	20	16	13651	44	22		
<b>Mental Health</b>																			
Acute			25130	81	18	18925	61	23	17995	58	16	5855	18	5	10549	34	7		
Res. Rehab.			19382	59	62				13140	40	23	2957	9	2					
<b>Extended Care</b>																			
NHCU						78183	238	179	81468	248	166				26280	80	113		
DOM									61101	186	144				104463	318	319		
Psych									22010	67	179								
<b>SCI</b>																			
SCI						21097	68	36							11790	38	25		
SCI RCF						9855	30												
<b>Blind Rehab</b>						11169	34	27											
<b>TOTAL</b>					88878	283	264	194764	610	424	202539	621	550	23433	75	65	185347	574	545

\* In options 4 and 5, DOM beds are not included in Hines totals.

Source: VA actuary projections; VHA workload data; BA&H analysis

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 4 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 422 vs. 544 needed beds.</li> <li>• <u>Extended Care.</u> Overall, less than sufficient capacity, 668 vs. 739 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 85 beds vs. 99 beds needed.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 36 vs. 68 legislative beds.</li> <li>• <u>Blind Rehab.</u> Less than sufficient capacity, 27 vs. 34 legislative beds.</li> </ul>				
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 151 vs. 204 needed beds.</li> <li>• <u>Extended Care.</u> Overall, sufficient capacity, 432 vs. 398 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 2 vs. 9 beds needed.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 25 vs. 38 legislative beds.</li> </ul>				
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>					
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• To fulfil the mission in this option, VACHCS West Side requires 22* ICU beds. The total facility bed requirements, including 81 acute mental health and 59 residential rehab, is 283 beds. With only 201 beds possible, there is insufficient space for the bed requirement.</li> </ul> <p>* <i>Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, <u>Guidelines for Design and Construction of Hospital and Health Care Facilities</u>, and <u>ADA Accessibility Guidelines for Building and Facilities (ADAAG)</u>, unless noted otherwise.</i></p>					

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 5**

Service	Lakeside			West Side			Hines*		North Chicago			Madison			Milwaukee		
	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds
<b>Medical</b>	68255	220	<b>264</b>				<b>CLOSED</b>		6205	20	37	8687	28	42	18615	60	59
<b>Surgical</b>	31956	103	64						621	2		6205	20	16	13651	44	22
<b>Mental Health</b>																	
Acute				43435	140	41			17995	58	16	5585	18	5	10549	34	7
Res. Rehab.				19382	59	62			13140	40	23	2957	9	2			
<b>Extended Care</b>																	
NHCU									159651	486	345				36135	110	113
DOM									61101	186	144				104463	318	319
Psych									22010	67	179						
<b>SCI</b>																	
SCI															32887	106	61
SCI RCF															<i>In NHCU</i>		
<b>Blind Rehab</b>									11169	34	27						
<b>TOTAL</b>	100211	323	328	62817	199	103			291891	893	771	23433	75	65	216299	672	581

\* In options 4 and 5, DOM beds are not included in Hines totals.

Source: VA actuary projections; VHA workload data; BA&H analysis

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 5 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 422 vs. 543 needed beds.</li> <li>• <u>Extended Care.</u> Less than sufficient capacity, 668 vs. 739 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 85 vs. 99.</li> <li>• <u>SCI.</u> Consolidated at Milwaukee VAMC.</li> <li>• <u>Blind Rehab.</u> Less than sufficient capacity, 27 vs. 34 beds.</li> </ul>				
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 151 vs. 204 needed beds.</li> <li>• <u>Extended Care.</u> Sufficient capacity, 432 vs. 428 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 2 vs. 9 needed beds.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 61 vs. 106 legislative beds.</li> </ul>				
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>					
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option Milwaukee requires 106 SCI beds. 38* SCI beds are possible. This creates a shortfall of 68 SCI beds. There is insufficient space to meet the programmed bed requirement. This option also requires 110 Extended Care beds. Currently 80 Extended Care beds are possible. There is a shortfall of 30 Extended Care beds. There is insufficient space to meet the programmed bed requirement.</li> <li>• The option requires 34 Blind Rehab beds at North Chicago. Currently there are no Blind Rehab beds at North Chicago. In addition 486 Nursing Home Care beds are required. 188* Nursing Home Care beds are possible. There is a shortfall of 298 Nursing Home Care beds. 67 Long Term Psych beds are required. 26 Long Term Psych beds are possible. There is a shortfall of 41 Long Term Psych beds. There is insufficient space to meet the programmed bed requirement.</li> </ul> <p>* Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, <u>Guidelines for Design and Construction of Hospital and Health Care Facilities</u>, and <u>ADA Accessibility Guidelines for Building and Facilities (ADAAG)</u>, unless noted otherwise.</p>					

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 6**

Service	Lakeside			West Side			Hines			North Chicago			Madison		Milwaukee		
	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Orig Study Beds	Cares BDOC	Cares Beds	Cares BDOC	Cares Beds	Orig Study Beds
<b>Medical</b>	16443	53	84	22028	71	103	29784	96	92	6205	20	22	<b>CLOSED</b>		27302	88	101
<b>Surgical</b>	7756	25	14	8067	26	21	16133	52	29	621	2				19856	64	38
<b>Mental Health</b>																	
Acute	310	1	5	24820	80	13	18925	61	23	17995	58	16			16133	52	12
Res. Rehab.				6570	20	18	12812	39	44	13140	40	23			2957	9	2
<b>Extended Care</b>																	
NHCU							78183	238	179	81468	248	166			26280	80	113
DOM								75		61101	186	144			104463	318	319
Psych										22010	67	179					
<b>SCI</b>																	
SCI							21097	68	36						11790	38	25
SCI RCF							9855	30									
<b>Blind Rehab</b>							11169	34	27								
<b>TOTAL</b>	24510	79	103	61484	197	155	222595	693	430	202539	621	550			208780	649	610

Source: VA actuary projections; VHA workload data; BA&H analysis Source:

**ATTACHMENT – ABSOLUTE CRITERIA FOR ORIGINAL OPTIONS: INPATIENT DATA**

**Market Driven Capacity Needs – 2010 (BA&H) Original Option 6 (continued)**

<b>HEALTHCARE NEEDS AND REQUIREMENTS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<b>Chicago</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity, 422 vs. 545 needed beds.</li> <li>• <u>Extended Care.</u> Less than sufficient capacity, 668 vs. 739 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity, 85 vs. 99 needed beds.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 36 vs. 68 legislative beds.</li> <li>• <u>Blind Rehab.</u> Less than sufficient capacity, 27 vs. 34 legislative beds.</li> </ul>				
<b>Wisconsin</b>	<ul style="list-style-type: none"> <li>• <u>Acute Med Surg.</u> Overall, less than sufficient capacity ,151 vs. 204 needed beds.</li> <li>• <u>Extended Care.</u> Sufficient capacity, 432 vs. 398 needed beds.</li> <li>• <u>RRTP.</u> Less than sufficient capacity for Res. Rehab, 2 vs. 9 needed beds.</li> <li>• <u>SCI.</u> Less than sufficient capacity, 25 vs. 38 legislative beds.</li> </ul>				
<b>CLINICAL ANALYSIS</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option, the clinical inventory provides for the availability of the full array of services from primary to extended care within the VISN except for transplants which when indicated would be provided by referral to the designated national VA facility. It assumes in the year 2010 the VISN will practice state of the art medicine, recognize quality and provide care in the most cost-efficient setting possible and consequently locate services appropriately.</li> <li>• The VISN may contract for highly specialized care, care not available through VA resources, and routine care that requires excessive travel. It further assumes there will be a sufficient number of providers and volume of procedures to ensure quality.</li> </ul>					
<b>SAFETY AND SUITABLE ENVIRONMENT</b>		<input type="checkbox"/>	<b>PASS</b>	<input type="checkbox"/>	<b>FAIL</b>
<ul style="list-style-type: none"> <li>• In this option Milwaukee requires 204 Acute Care beds. There are 114* Acute Care beds possible. This creates a shortfall of 90 Acute Care beds. In addition, 9 PRRPT beds are also required. There is insufficient space to meet the programmed bed requirement.</li> <li>• North Chicago requires 248 Nursing Home Care beds. There are 188* Nursing Home Care beds possible. This creates a shortfall of 60 Nursing Home Care beds. 67 Long Term Psych beds are required. 26* Long Term Psych beds are possible. This creates a shortfall of 41 Long Term Psych beds. There is insufficient space to meet the programmed bed requirement.</li> </ul> <p>* <i>Possible bed count based on existing and/ or renovated bed areas meeting JCAHO, <u>Guidelines for Design and Construction of Hospital and Health Care Facilities</u>, and <u>ADA Accessibility Guidelines for Building and Facilities (ADAAG)</u>, unless noted otherwise.</i></p>					