VA Recommendations to the

ASSET AND INFRASTRUCTURE REVIEW COMMISSION

March 2022

Appendix H

Cost Benefit Analysis – VISN 01

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The recommendations for modernization and realignment of VHA infrastructure submitted by the Secretary of the Department of Veterans Affairs to the Asset and Infrastructure Review (AIR) Commission are focused on allowing VA to provide accessible, timely, and high-quality health care for Veterans now and in the future. To inform the recommendations, VA conducted a Cost Benefit Analysis (CBA) that examines the cost-efficiency and benefits to Veterans of various courses of action (COAs) within each market. The CBA compares the costs and benefits associated with maintaining the current facilities, modernizing the current facilities, or strategically realigning and modernizing facilities in each market to inform the identification of a preferred COA.

The CBA aligns with requirements outlined in Section 1703C of Title 38, United States Code (U.S.C.), as added by Section 203 of the VA MISSION Act of 2018.

> *VA MISSION Act, Section 203(2)(F)*
>
> *"In making recommendations under this subsection, the Secretary shall consider…the extent and timing of potential costs and savings, including the number of years such costs or savings will be incurred, beginning with the date of completion of the proposed recommendation."*

This CBA summary document defines the COAs, provides a brief overview of the methodology, and outlines the results of the CBA and the associated sensitivity analysis.

Overview of COAs and Methodology

The Cost Benefit Analysis (CBA) reviews, analyzes, and compares the costs and benefits of three distinct courses of action (COA):

- maintaining VA's current facilities assuming no changes or additional modernization to current facilities, programs, and infrastructure (COA Name: Status Quo)
- modernizing the current facilities without strategically realigning facilities (COA Name: Modernization)
- strategically realigning and modernizing facilities (COA Name: VA Recommendation to the AIR Commission)

To evaluate these courses of action, VA examined the combined cost and benefits of each COA for each market. The CBA was conducted at the market level, rather than at the facility level, to allow for a holistic assessment of a COA's impact that considers optimization of the market across all health care facilities. The financial costs were assessed using a Present Value (PV) analysis while the non-financial benefits were assessed using a Benefits Analysis Scoring process. Ultimately, the CBA results in a Cost-Benefit Index – a simple metric by which to compare the combined cost and non-financial benefits associated with each COA. The CBI equals the total life-cycle cost (PV) of each COA in PV dollars, divided by the Benefits Analysis score for that COA's non-financial benefits normalized to the billions place. The COA with the lowest CBI score is the preferred COA.

Summary of Results

The VA Recommendation COA is the leading COA analyzed in the VISN 01 East Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (2.57) is 43.1% lower than the Status Quo COA (4.52) and 25.0% lower than the Modernization COA (3.43).

The VA Recommendation COA is $2.4 B (6.7%) more expensive than the Status Quo COA and $880.6 M (2.3%) more expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo and Modernization COAs, it also increases benefits as seen by a 15-point benefits score compared to 8 for the Status Quo COA and 11 for the Modernization COA.

The tables below detail the present values, benefit scores, and CBIs for each COA.

Table 1 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($36,192,188,287)	($37,742,052,891)	($38,622,608,798)
Benefit Analysis Score	8	11	15
CBI (Normalized in $Billions)	4.52	3.43	2.57
CBI % Change vs. Status Quo	N/A	-24.2%	-43.1%
CBI % Change vs. Modernization	N/A	N/A	-25.0%

Table 2 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($1,549,864,604)	($2,498,516,400)
Operational Cost Variance vs. Status Quo	N/A	$0	$68,095,889
Estimated Total Cost Variance vs. Status Quo	N/A	($1,549,864,604)	($2,430,420,511)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($880,555,907)

Note: Operational unit costs were provided at the parent facility level not at the facility level. Therefore, the analysis does not estimate the changes in operational costs stemming from new, expanded, or removed POC. The analysis only shows changes to operational costs when a service line is shifted, at the parent facility level, from VA care to Non-VA care.

Table 3 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	3
Quality	2	3	3
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**8**	**11**	**15**

VA Recommendation

The VA Recommendation for the VISN 01 East Market COA is detailed below.

- Modernize and realign the Bedford VA Medical Center (VAMC) by:
    - Constructing a replacement VAMC with inpatient mental health, CLC, RRTP, urgent care, and outpatient services in the vicinity of Bedford, Massachusetts
    - Establishing a strategic collaboration to add outpatient surgical and endoscopy services. If unable to enter into a strategic collaboration, continue to utilize community providers
    - Closing the existing Bedford VAMC
- Modernize the inpatient medical and surgical and SCI/D facilities at the West Roxbury VAMC
- Modernize and realign the Jamaica Plain VAMC by:
    - Relocating RRTP, outpatient surgical, and high complexity outpatient services to existing or future VA facilities and discontinuing these services at the Jamaica Plain VAMC
    - Relocating urgent care services currently offered at the Jamaica Plain VAMC to community providers and discontinuing those services at the Jamaica Plain VAMC
    - Maintaining research and education, the Brain Bank, and the Million Veteran Program services at the Jamaica Plain VAMC while establishing a strategic collaboration to consolidate services into remaining buildings at the Jamaica Plain VAMC
- Modernize and realign the Providence VAMC by:
    - Establishing RRTP services at the Providence VAMC
    - Modernizing the existing inpatient medical and surgical and mental health patient rooms at the Providence VAMC by converting to private rooms
- Modernize and realign the Brockton VAMC by:
    - Establishing a strategic collaboration to add outpatient surgical and endoscopy services. If unable to enter into a strategic collaboration, continue to utilize community providers
    - Modernizing the Brockton VAMC

- Modernize and realign outpatient facilities and services in the market by:
  - Establishing a new MS CBOC in the vicinity of Salem, Massachusetts
  - Relocating all services to the proposed Salem MS CBOC and closing the Lynn CBOC
  - Relocating all services to the proposed Salem MS CBOC and closing the Gloucester OOS
  - Relocating the Quincy OOS to a new site in the vicinity of South Weymouth, Massachusetts and closing the Quincy OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 01 East Market across a 30-year horizon. The cost of the VA Recommendation COA ($38.6 B) was higher than the Status Quo COA ($36.2 B) and the Modernization COA ($37.7 B).

For the VISN 01 East Market, the VA Recommendation COA is $2.4 B (6.7%) more expensive than the Status Quo COA and $880.6 M (2.3%) more expensive than the Modernization COA. The cost difference between the VA Recommendation COA and Status Quo COA can be attributed to new facilities, closing or modernizing existing facilities, and scaling capacity of existing facilities up or down to meet future Veteran in-house demand to accommodate changes in demand.

The table below outlines the costs associated with each of the COAs. For more detail refer to Appendix A – VISN 01 East: Capital and Operational Costs Detail.

Table 4 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	(36,192,188,287)	(37,742,052,891)	(38,622,608,798)
Capital Cost Variance vs. Status Quo	N/A	($1,549,864,604)	($2,498,516,400)
Operational Cost Variance vs. Status Quo	N/A	$0	$68,095,889
Non-VA Care Operational Cost Variance	N/A	$0	($184,076,570)
VA Care Operational Cost Variance	N/A	$0	$252,172,459
Estimated Total Cost Variance vs. Status Quo	$0	($1,549,864,604)	($2,430,420,511)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($880,555,907)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 01 East Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 5 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	3
Quality	2	3	3
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**8**	**11**	**15**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 01 East: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

Within the Demand and Supply domain, the CBA considers how each COA impacts VA's ability to meet Veteran demand in the future. Each COA is assessed on two benefit components: (1) the ability to balance demand and supply; (2) the changes to facility placement or service offerings that improve VA's ability to meet future demand.

The table below shows the scores for VISN 01 East for this domain.

Table 6 – Demand and Supply Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3

Status Quo: The COA received a score of 1 because at least one inpatient service line was over/under supplied, or more than 50% of specialties were inadequately supplied when compared to future Veteran in-house demand. Additionally, no changes to facilities or services were introduced that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, expansion of services).

Modernization: The COA received a score of 2 because, while Modernization right-sizes services to meet future Veteran in-house demand, the COA does not include changes to facilities or services that improve

VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, addition of new services).

VA Recommendation: The COA received a score of 3 because it right-sizes services to meet future Veteran enrollee demand and includes changes to facilities or services that improve VA's ability to meet future Veteran enrollee demand based on guidelines established in the CBA methodology. These changes include the following:

- Establishes a new Salem MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 7,001 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new South Weymouth CBOC to provide primary care and outpatient mental health services; there are 6,024 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Expands the Haverhill CBOC to a MS CBOC, adding specialty care services
- Expands the Plymouth OOS to a CBOC, adding primary care services
- Expands the New Bedford CBOC to a MS CBOC, adding specialty care services
- Expands the Hyannis CBOC to a MS CBOC, adding specialty care services
- Establishes the new Bedford outpatient surgery partnership
- Establishes the new Brockton outpatient surgery partnership

Access

Within the Access domain, the CBA considers how each COA impacts Veteran access to care in the future. Each COA is assessed on the change in enrollee proximity to VA-provided primary care, specialty care, and outpatient mental health care.

The table below shows the CBA access scores for VISN 01 East for this domain.

Table 7 – Access Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Access	2	2	3

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (inclusive of VA, Community Care Network providers, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future high-performing integrated delivery network (HPIDN).

Status Quo: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

Modernization: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

VA Recommendation: The COA received a score of 3 because access to VA-provided primary care was maintained within 1%, specialty care increased 1% or more, and outpatient mental health care increased 1% or more.

Quality

Within the Quality domain, the CBA considers how each COA impacts the quality of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the ability of the main patient care facilities to support modern healthcare; (2) the ability of demand to support clinical competency.

The table below shows the scores for VISN 01 East for this domain.

Table 8 – Quality Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Quality	2	3	3

Status Quo: The COA received a score of 2 for two reasons. First, the COA includes main patient care facilities that were built prior to the emergence of modern healthcare design principles and specific standards to support modern medicine (e.g., floor-to-floor heights, corridor widths, columns spacing, and utility infrastructure requirements). Second, the COA includes facilities with projected future demand at or above VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Modernization: The COA received a score of 3 for two reasons. First, the COA contains only modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand at or above VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA contains only modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand at or above VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Facilities and Sustainability

Within the Facilities and Sustainability domain, the CBA considers how each COA impacts the sustainability of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the useful life of the main patient care facilities; (2) changes that strengthen VA's ability to recruit and retain providers.

The table below shows the scores for VISN 01 East for this domain.

Table 9 – Facilities and Sustainability Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	1	2	3

Note: The American Hospital Association estimates that a hospital's useful life, a measure which predicts the productive period of a typical capital asset before it becomes obsolete or needs replacement, is currently 40 years.

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes at least one main patient care facility that exceeds its useful life as defined by the American Hospital Association, indicating it may be obsolete or need replacement. Second, the COA does not include changes that strengthen VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, while the COA includes modernized infrastructure, which may attract providers, it does not include additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, in addition to modernized infrastructure which may attract providers, it also includes additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities). The COA includes the following actions to support VA's ability to recruit or retain providers:

- Establishes the new Bedford outpatient surgery partnership
- Establishes the new Brockton outpatient surgery partnership

Mission

Within the Mission domain, the CBA considers how each COA impacts VA's ability to support its statutory missions of Education, Research, and Emergency Preparedness in the future. Each COA is assessed on three benefit components: (1) the impact on training programs; (2) the impact on research programs; (3) the impact on emergency preparedness.

A COA's overall score in the Mission domain is determined by the rounded average (unweighted) of its component (e.g., Education, Research, Emergency Preparedness) scores. The table below shows the scores for VISN 01 East for this domain.

Table 10 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	3
Research	2	2	3
Emergency Preparedness	2	2	2
Overall Mission Score (Rounded Average)	**2**	**2**	**3**

Status Quo: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Modernization: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

VA Recommendation: The COA received a score of 3 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 3 because inpatient acute services remain VA-delivered and thus the COA maintains existing training programs. Additionally, the COA includes new (not replacement) infrastructure that creates new opportunities for training within the market.
- **Research:** The COA received a score of 3 because it maintains all research programs and builds new (not replacement) infrastructure to support additional research space.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Sensitivity Analysis

A sensitivity analyses study shows how various sources of uncertainty in a mathematical model contribute to the model's overall uncertainty. The market is considered sensitive to a scenario when the

VA Recommendation is no longer the leading COA due to changes in benefit scores, VA capital costs, VA operational costs, or non-VA operational costs.

The table below outlines the sensitivity analysis scenarios completed.

Table 11 – Sensitivity Analysis Scenarios

Sensitivity Analysis Scenarios
Increase Benefit Scores for Status Quo and Modernization in increments of one from 1 to 3 points
Increase VA Capital Costs in 50% increments from 0% to 300%
Increase VA Operational Costs in 50% increments from 0% to 300%
Increase Non-VA Operational Costs in 50% increments from 0% to 300%

Sensitivity Analysis Results Summary

In the VISN 01 East Market, no scenarios changed the outcome of the CBA.

Sensitivity Analysis Full Results

The below tables show the results across all sensitivity analysis scenarios.

Table 12 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	4.52	3.43	2.57	VA Recommendation
+1	4.02	3.15	2.57	VA Recommendation
+2	3.62	2.90	2.57	VA Recommendation
+3	3.29	2.70	2.57	VA Recommendation

Table 13 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	4.52	3.43	2.57	VA Recommendation
50%	4.84	3.73	2.82	VA Recommendation
100%	5.15	4.03	3.07	VA Recommendation
150%	5.46	4.32	3.32	VA Recommendation
200%	5.77	4.62	3.57	VA Recommendation
250%	6.08	4.92	3.82	VA Recommendation
300%	6.40	5.22	4.07	VA Recommendation

Table 14 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	4.52	3.43	2.57	VA Recommendation
50%	6.26	4.70	3.49	VA Recommendation
100%	8.00	5.96	4.41	VA Recommendation
150%	9.74	7.22	5.33	VA Recommendation
200%	11.48	8.49	6.25	VA Recommendation
250%	13.22	9.75	7.17	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	14.95	11.02	8.09	VA Recommendation

Table 15 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	4.52	3.43	2.57	VA Recommendation
50%	4.74	3.59	2.69	VA Recommendation
100%	4.95	3.74	2.81	VA Recommendation
150%	5.16	3.89	2.93	VA Recommendation
200%	5.37	4.05	3.05	VA Recommendation
250%	5.58	4.20	3.17	VA Recommendation
300%	5.79	4.35	3.29	VA Recommendation

Appendix A – VISN 01 East: Capital and Operational Costs Detail

Table 16 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	4,412,893	4,954,582
Build New GSF	-	2,813,677	3,249,222
Renovate In Place GSF	-	232,787	222,223
Matched Convert To GSF	-	381,642	345,909
Demolition GSF	-	3,328,910	3,420,353
Total Build New Cost	$0	($3,162,038,099)	($3,590,812,285)
Total Renovate In Place Cost	$0	($101,035,350)	($96,139,227)
Total Matched Convert To Cost	$0	($186,351,724)	($171,852,473)
Total Demolition Cost	$0	($143,884,186)	($121,442,305)
Total Lease Build-Out Cost	$0	($45,365,179)	($50,029,333)
Total New Lease Cost	$0	($191,606,777)	($206,133,888)
Total Existing Lease Cost	($96,956,886)	($96,956,747)	($92,944,417)
NRM Costs for Owned Facilities	($3,504,858,975)	($515,172,648)	($578,410,807)
FCA Correction Cost	($1,235,550,308)	N/A	N/A
Estimated Base Modernization Cost	($4,837,366,169)	($4,442,410,709)	($4,907,764,736)
Additional Common/Lobby Space Needed (GSF)	-	984,787	1,137,228
Cost of Additional Common/Lobby Space	$0	($934,490,666)	($1,079,553,233)
Additional Parking Cost	$0	($381,610,261)	($687,297,733)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($7,986,799)	($11,383,098)
Seismic Correction Cost	($30,942,029)	($5,029,475)	($5,029,477)
Non-Building FCA Correction Cost	($126,089,201)	($126,089,198)	($96,084,445)
Activation Costs	$0	($646,644,895)	($705,801,078)
Estimated Additional Costs for Modernization	($157,031,230)	($2,101,851,294)	($2,585,149,063)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($4,994,397,399)	($6,544,262,003)	($7,492,913,799)

Table 17 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($14,333,846,862)	($14,333,846,862)	($14,199,748,567)
Fixed Direct	($1,399,952,879)	($1,399,952,879)	($1,383,109,007)
VA Specific Direct	($892,187,063)	($892,187,063)	($886,436,786)
Indirect	($8,709,647,006)	($8,709,647,006)	($8,635,179,624)
VA Specific Indirect	($960,951,597)	($960,951,597)	($953,846,850)
Research and Education	($116,722,253)	($116,722,253)	($116,130,355)
VA Overhead	($1,398,174,716)	($1,398,174,716)	($1,384,858,727)
VA Care Operational Cost Total (PV)	($27,811,482,375)	($27,811,482,375)	($27,559,309,917)
CC Direct	($1,987,297,969)	($1,987,297,969)	($2,144,163,876)
Delivery and Operations	($76,932,209)	($76,932,209)	($85,366,949)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($70,572,988)	($70,572,988)	($80,578,476)
CC Overhead	($100,680,723)	($100,680,723)	($111,968,372)
Admin PMPM	($1,150,824,623)	($1,150,824,623)	($1,148,307,410)
Non-VA Care Operational Cost Total (PV)	($3,386,308,512)	($3,386,308,512)	($3,570,385,082)
Estimated Operational Costs (PV)	($31,197,790,888)	($31,197,790,888)	($31,129,694,999)

Appendix B – VISN 01 East: Benefits Analysis Key Data

Below are key data points used in the benefit analysis, summarized in the above Benefit Analysis section.

Demand and Supply

Inpatient

Table 18 – Demand and Supply Key Data Points for Scoring – Inpatient (IP)

Service Line	100% of FY29 In-house Bed Need	120% of FY29 In-house Bed Need	Operating Beds	Supply Adequacy (within 100-120% of in-house demand)
IP CLC	290	347	354	Over Supplied
IP Med/Surg	124	149	187	Over Supplied
IP MH	130	156	186	Over Supplied

Note: Community Living Center (CLC); Medicine (Med); Surgery (Surg); Mental Health (MH)

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 19 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	20	74%
Under Supplied	7	26%

Note: VA supply in the Status Quo COA is quantitatively evaluated based on the data above. It is assumed the Modernization COA scales the capacity of existing facilities up or down to meet future Veteran in-house demand. Similar to the Modernization COA, it is assumed the VA Recommendation COA scales the capacity of existing and proposed facilities up or down to meet future Veteran in-house demand. However, the VA Recommendation COA may account for factors that demand projections do not consider that may shift the future balance of in-house and community workload, such as:

- Areas with unmet Veteran demand that may warrant a net new point of care
- Low-census inpatient acute programs that may pose risks to quality and training programs, potentially warranting a shift to community providers
- Community capacity factors that may warrant changes to VA capacity

Source: Office of Productivity, Efficiency and Staffing 2019 Capacity Report

Table 20 – New Facility Demand Guidelines

Facility or Service	Guideline
Inpatient Acute VAMCs	Greater than or equal to 35,000 overlapping enrollees
Inpatient CLC	Greater than or equal to 21,000 overlapping enrollees
Health Care Center	Greater than or equal to 34,000 overlapping enrollees
MS CBOC	Greater than or equal to 4,300 non-overlapping enrollees
CBOC	Greater than or equal to 2,500 non-overlapping enrollees

Note: The above guidelines are used to determine whether a new (not replacement) point of care or service proposed in the VA recommendation had adequate demand.

Access

Table 21 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	88.0%	88.0%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	92.9%	92.9%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	96.3%	96.3%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.9%	99.9%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	88.0%	88.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	92.9%	92.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	96.3%	96.3%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.9%	99.9%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	88.0%	92.7%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	92.9%	93.0%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	96.3%	99.5%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.9%	99.9%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.9%	99.9%	Maintained within 1%

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (HPIDN) (inclusive of VA, Community Care Network, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future HPIDN. The table above shows the results for enrollee proximity to the full HPIDN as well as to VA-provided care in the market.

Source: Enrollee data from the FY19 Geocoded Enrollee File. Existing VA facility location data from VAST. Commercial provider location data from Definitive Healthcare.

Quality

Main Patient Care Facility Construction Date

Table 22 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V01) (518) Bedford	1928	Yes

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V01) (523) Jamaica Plain	1952	Yes
(V01) (523A4) West Roxbury	1943	Yes
(V01) (523A5) Brockton	1955	Yes
(V01) (650) Providence	1948	Yes

Source: Main patient care facility construction and renovation dates from CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Inpatient Acute Demand

Table 23 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V01) (518) Bedford	IP Med	20 ADC	No Service	N/A
(V01) (518) Bedford	IP Surg	1,600 Cases	No Service	N/A
(V01) (518) Bedford	IP MH	8 ADC	Yes	Replace
(V01) (523A4) West Roxbury	IP Med	20 ADC	Yes	Maintain
(V01) (523A4) West Roxbury	IP Surg	1,600 Cases	Yes	Maintain
(V01) (523A4) West Roxbury	IP MH	8 ADC	No Service	N/A
(V01) (650) Providence	IP Med	20 ADC	Yes	Maintain
(V01) (650) Providence	IP Surg	1,600 Cases	Yes	Maintain
(V01) (650) Providence	IP MH	8 ADC	Yes	Maintain
(V01) (523A5) Brockton	IP Med	20 ADC	No Service	N/A
(V01) (523A5) Brockton	IP Surg	1,600 Cases	No Service	N/A

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V01) (523A5) Brockton	IP MH	8 ADC	Yes	Maintain

Note: The Status Quo and Modernization COAs are assumed to maintain all current facilities and services. The VA Recommendation COA proposes maintaining, partnering, and divesting of services at each facility, shown in the last column titled "VA Recommendation". To score a 3, the VA recommendation must partner or divest of all low-demand services.

Source: FY 2029 average daily census for inpatient services is based on Enrollee Healthcare Projection Model Base Year 2019. 2019 Total Surgical Cases is from the VA National Surgery Office.

Facilities and Sustainability

Table 24 – Facilities and Sustainability Key Data Points for Scoring

Facility	Main Patient Care Facility Construction Date	Most Recent Main Patient Care Facility Renovation Date	Exceeds Useful Life?
(V01) (518) Bedford	1928	N/A	Yes
(V01) (523) Jamaica Plain	1952	N/A	Yes
(V01) (523A4) West Roxbury	1943	1988	Yes
(V01) (523A5) Brockton	1955	1989	Yes
(V01) (650) Providence	1948	1998	Yes

Note: Exceeding useful life is defined as 1) When a main patient care facility was built before 1970 it has exceeded its useful life, even if it has undergone major renovation in the last 40 years. 2) When a main patient care facility was built after 1970 but is still more than 40 years old (built on or after 1971 and before 1989), it must have undergone major renovation within the last 40 years to not exceed its useful life. 3) When a main patient care facility was built in or after 1989, it has not exceeded its useful life.

Source: From CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Table 25: Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V01) Bedford OP Surg Partnership	Yes
(V01) Brockton OP Surg Partnership	Yes

Mission

Table 26 – Mission Key Data Points for Scoring

The Status Quo and Modernization COAs are assumed to have no impact on VA's statutory missions. The impact of the VA Recommendation on VA's statutory missions is shown in the table below:

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V01) (518) Bedford	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (523A4) West Roxbury	No impact on training	No Research Program	Maintains PRC-designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (650) Providence	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (523A5) Brockton	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (523) Jamaica Plain	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 01 Far North

The recommendations for modernization and realignment of VHA infrastructure submitted by the Secretary of the Department of Veterans Affairs to the Asset and Infrastructure Review (AIR) Commission are focused on allowing VA to provide accessible, timely, and high-quality health care for Veterans now and in the future. To inform the recommendations, VA conducted a Cost Benefit Analysis (CBA) that examines the cost-efficiency and benefits to Veterans of various courses of action (COAs) within each market. The CBA compares the costs and benefits associated with maintaining the current facilities, modernizing the current facilities, or strategically realigning and modernizing facilities in each market to inform the identification of a preferred COA.

The CBA aligns with requirements outlined in Section 1703C of Title 38, United States Code (U.S.C.), as added by Section 203 of the VA MISSION Act of 2018.

> *VA MISSION Act, Section 203(2)(F)*
>
> *"In making recommendations under this subsection, the Secretary shall consider…the extent and timing of potential costs and savings, including the number of years such costs or savings will be incurred, beginning with the date of completion of the proposed recommendation."*

This CBA summary document defines the COAs, provides a brief overview of the methodology, and outlines the results of the CBA and the associated sensitivity analysis.

Overview of COAs and Methodology

The Cost Benefit Analysis (CBA) reviews, analyzes, and compares the costs and benefits of three distinct courses of action (COA):

- maintaining VA's current facilities assuming no changes or additional modernization to current facilities, programs, and infrastructure (COA Name: Status Quo)
- modernizing the current facilities without strategically realigning facilities (COA Name: Modernization)
- strategically realigning and modernizing facilities (COA Name: VA Recommendation to the AIR Commission)

To evaluate these courses of action, VA examined the combined cost and benefits of each COA for each market. The CBA was conducted at the market level, rather than at the facility level, to allow for a holistic assessment of a COA's impact that considers optimization of the market across all health care facilities. The financial costs were assessed using a Present Value (PV) analysis while the non-financial benefits were assessed using a Benefits Analysis Scoring process. Ultimately, the CBA results in a Cost-Benefit Index – a simple metric by which to compare the combined cost and non-financial benefits associated with each COA. The CBI equals the total life-cycle cost (PV) of each COA in PV dollars, divided by the Benefits Analysis score for that COA's non-financial benefits normalized to the billions place. The COA with the lowest CBI score is the preferred COA.

Summary of Results

The VA Recommendation COA is the leading COA analyzed in the VISN 01 Far North Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (0.83) is 45.8% lower than the Status Quo COA (1.53) and 25.8% lower than the Modernization COA (1.11).

The VA Recommendation COA is $61.2 M (0.6%) more expensive than the Status Quo COA and $389.7 M (3.5%) less expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo COA and decreases cost compared to the Modernization COA, it also increases benefits as seen by a 13-point benefits score compared to 7 for the Status Quo COA and 10 for the Modernization COA.

The tables below detail the present values, benefit scores, and CBIs for each COA.

Table 27 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($10,680,415,937)	($11,131,296,516)	($10,741,609,354)
Benefit Analysis Score	7	10	13
CBI (Normalized in $Billions)	1.53	1.11	0.83
CBI % Change vs. Status Quo	N/A	-27.0%	-45.8%
CBI % Change vs. Modernization	N/A	N/A	-25.8%

Table 28 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($450,880,579)	($592,888,462)
Operational Cost Variance vs. Status Quo	N/A	$0	$531,695,045
Estimated Total Cost Variance vs. Status Quo	$0	($450,880,579)	($61,193,417)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$389,687,162

Note: Operational unit costs were provided at the parent facility level not at the facility level. Therefore, the analysis does not estimate the changes in operational costs stemming from new, expanded, or removed points of care (POC). The analysis only shows changes to operational costs when a service line is shifted, at the parent facility level, from VA care to non-VA care.

Table 29 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	1
Quality	1	2	3
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**7**	**10**	**13**

VA Recommendation

The VA Recommendation for the VISN 01 Far North Market COA is detailed below.

- Modernize and realign the Togus VAMC by:
  - Relocating CLC services at the Togus VAMC to current or future VA facilities and discontinuing CLC services at the Togus VAMC
  - Establishing RRTP services at the Togus VAMC
  - Establishing a strategic collaboration to provide inpatient medical care and inpatient/outpatient surgical care and discontinuing those services at the Togus VAMC. If unable to enter into a strategic collaboration, continue to provide those services at the VAMC
  - Converting the emergency department to an urgent care center and discontinuing emergency department services at the Togus VAMC
- Modernize by establishing a new stand-alone CLC in the vicinity of Portland, Maine
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new CBOC in the vicinity of Farmington, Maine
  - Relocating all services to the proposed Farmington CBOC and closing the Rumford CBOC
  - Discontinuing the use of the Bingham Mobile unit
  - Relocating all services to the Portland MS CBOC and closing the Saco CBOC
  - Relocating all services at the Houlton OOS and closing the Houlton OOS
  - Relocating all services at the Fort Kent OOS and closing the Fort Kent OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 01 Far North Market across a 30-year horizon. The cost of the VA Recommendation COA ($10.74 B) was higher than the Status Quo COA ($10.68 B) and lower than the Modernization COA ($11.1 B).

For the VISN 01 Far North Market, the VA Recommendation COA is $61.2 M (0.6%) more expensive than the Status Quo COA and $389.7 M (5.4%) less expensive than the Modernization COA. The cost difference between the VA Recommendation COA and Status Quo COA can be attributed to new facilities, closing or modernizing existing facilities, and scaling capacity of existing facilities up or down to meet future Veteran in-house demand to accommodate changes in demand.

The table below outlines the costs associated with each of the COAs. For more detail refer to Appendix A – VISN 01 Far North: Capital and Operational Costs Detail.

Table 30 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($10,680,415,937)	($11,131,296,516)	($10,741,609,354)
Capital Cost Variance vs. Status Quo	N/A	($450,880,579)	($592,888,462)
Operational Cost Variance vs. Status Quo	N/A	$0	$531,695,045
Non-VA Care Operational Cost Variance	N/A	$0	($690,403,044)
VA Care Operational Cost Variance	N/A	$0	$1,222,098,090
Estimated Total Cost Variance vs. Status Quo	$0	($450,880,579)	($61,193,417)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$389,687,162

Benefit Analysis

This section describes the benefit analysis results for the VISN 01 Far North Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 31 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	1
Quality	1	2	3
Facilities and Sustainability	1	2	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Mission	2	2	3
Total Benefit Score	**7**	**10**	**13**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 01 Far North: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

Within the Demand and Supply domain, the CBA considers how each COA impacts VA's ability to meet Veteran demand in the future. Each COA is assessed on two benefit components: (1) the ability to balance demand and supply; (2) the changes to facility placement or service offerings that improve VA's ability to meet future demand.

The table below shows the scores for VISN 01 Far North for this domain.

Table 32 – Demand and Supply Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3

Status Quo: The COA received a score of 1 because at least one inpatient service line was over/under supplied, or more than 50% of specialties were inadequately supplied when compared to future Veteran in-house demand. Additionally, no changes to facilities or services were introduced that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, expansion of services).

Modernization: The COA received a score of 2 because, while Modernization right-sizes services to meet future Veteran in-house demand, the COA does not include changes to facilities or services that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, addition of new services).

VA Recommendation: The COA received a score of 3 because it right-sizes services to meet future Veteran enrollee demand and includes changes to facilities or services that improve VA's ability to meet future Veteran enrollee demand based on guidelines established in the CBA methodology. These changes include the following:

- Establishes a new Portland CLC to provide inpatient community living center services; 25,050 enrollees live within 60 minutes of the proposed facility
- Establishes the new Portland, ME inpatient medicine and surgery, and outpatient surgery partnership

Access

Within the Access domain, the CBA considers how each COA impacts Veteran access to care in the future. Each COA is assessed on one benefit component: change in enrollee proximity to VA-provided primary care, specialty care, and outpatient mental health care.

The table below shows the scores for VISN 01 Far North for this domain.

Table 33 – Access Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Access	2	2	1

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (inclusive of VA, Community Care Network providers, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future high-performing integrated delivery network (HPIDN).

Status Quo: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

Modernization: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

VA Recommendation: The COA received a score of 1 because access to VA-provided primary care decreased 1% or more, specialty care increased 1% or more, and outpatient mental health care was maintained within 1%.

Quality

Within the Quality domain, the CBA considers how each COA impacts the quality of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the ability of the main patient care facilities to support modern healthcare; (2) the ability of demand to support clinical competency.

The table below shows the scores for VISN 01 Far North for this domain.

Table 34 – Quality Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Quality	1	2	3

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes main patient care facilities that were built prior to the emergence of modern healthcare design principles and specific standards to support modern medicine (e.g., floor-to-floor heights, corridor widths, columns spacing, and utility infrastructure requirements). Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces aged infrastructure with modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that

sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA contains only modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand at or above VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery. The COA includes the following actions to ensure adequate demand across inpatient acute service lines throughout the market:

- Transition the Togus VAMC low census inpatient medicine program to the Partnership with Academic Affiliate or different Community Partner in Portland, ME through a facility use charge agreement/credentialing VA providers in a community provider space to deliver inpatient medicine and surgery, and outpatient surgery services

Facilities and Sustainability

Within the Facilities and Sustainability domain, the CBA considers how each COA impacts the sustainability of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the useful life of the main patient care facilities; (2) changes that strengthen VA's ability to recruit and retain providers.

The table below shows the scores for VISN 01 Far North for this domain.

Table 35 – Facilities and Sustainability Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	1	2	3

Note: The American Hospital Association estimates that a hospital's useful life, a measure which predicts the productive period of a typical capital asset before it becomes obsolete or needs replacement, is currently 40 years.

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes at least one main patient care facility that exceeds its useful life as defined by the American Hospital Association, indicating it may be obsolete or need replacement. Second, the COA does not include changes that strengthen VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, while the COA includes modernized infrastructure, which may attract providers, it does not include additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, in addition to modernized infrastructure, which may attract providers, it also includes additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities). The COA includes the following actions to support VA's ability to recruit or retain providers:

- Establishes the new Portland, ME inpatient medicine and surgery, and outpatient surgery partnership

Mission

Within the Mission domain, the CBA considers how each COA impacts VA's ability to support its statutory missions of Education, Research, and Emergency Preparedness in the future. Each COA is assessed on three benefit components: (1) the impact on training programs; (2) the impact on research programs; (3) the impact on emergency preparedness.

A COA's overall score in the Mission domain is determined by the rounded average (unweighted) of its component (e.g., Education, Research, Emergency Preparedness) scores. The table below shows the scores for VISN 01 Far North for this domain.

Table 36 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	3
Research	2	2	3
Emergency Preparedness	2	2	2
Overall Mission Score (Rounded Average)	**2**	**2**	**3**

Status Quo: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Modernization: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.

- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

VA Recommendation: The COA received a score of 3 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 3 because inpatient acute services remain VA-delivered and thus the COA maintains existing training programs. Additionally, the COA includes new (not replacement) infrastructure that creates new opportunities for training within the market.
- **Research:** The COA received a score of 3 because it maintains all research programs and builds new (not replacement) infrastructure to support additional research space.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Sensitivity Analysis

A sensitivity analyses study shows how various sources of uncertainty in a mathematical model contribute to the model's overall uncertainty. The market is considered sensitive to a scenario when the VA Recommendation is no longer the leading COA due to changes in benefit scores, VA capital costs, VA operational costs, or non-VA operational costs.

The table below outlines the sensitivity analysis scenarios completed.

Table 37 – Sensitivity Analysis Scenarios

Sensitivity Analysis Scenarios
Increase Benefit Scores for Status Quo and Modernization in increments of one from 1 to 3 points
Increase VA Capital Costs in 50% increments from 0% to 300%
Increase VA Operational Costs in 50% increments from 0% to 300%
Increase Non-VA Operational Costs in 50% increments from 0% to 300%

Sensitivity Analysis Results Summary

In the VISN 01 Far North Market, no scenarios changed the outcome of the CBA.

Sensitivity Analysis Full Results

The below tables show the results across all sensitivity analysis scenarios.

Table 38 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	1.53	1.11	0.83	VA Recommendation
+1	1.34	1.01	0.83	VA Recommendation
+2	1.19	0.93	0.83	VA Recommendation
+3	1.07	0.86	0.83	VA Recommendation

Table 39 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.53	1.11	0.83	VA Recommendation
50%	1.58	1.17	0.88	VA Recommendation
100%	1.63	1.23	0.93	VA Recommendation
150%	1.69	1.29	0.98	VA Recommendation
200%	1.74	1.35	1.03	VA Recommendation
250%	1.79	1.41	1.08	VA Recommendation
300%	1.85	1.47	1.14	VA Recommendation

Table 40 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.53	1.11	0.83	VA Recommendation
50%	1.93	1.40	1.00	VA Recommendation
100%	2.33	1.68	1.17	VA Recommendation
150%	2.74	1.96	1.34	VA Recommendation
200%	3.14	2.24	1.51	VA Recommendation
250%	3.54	2.52	1.68	VA Recommendation
300%	3.95	2.81	1.85	VA Recommendation

Table 41 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.53	1.11	0.83	VA Recommendation
50%	1.83	1.33	1.02	VA Recommendation
100%	2.14	1.54	1.21	VA Recommendation
150%	2.44	1.76	1.40	VA Recommendation
200%	2.75	1.97	1.59	VA Recommendation
250%	3.06	2.18	1.78	VA Recommendation
300%	3.36	2.40	1.97	VA Recommendation

Appendix A – VISN 01 Far North: Capital and Operational Costs Detail

Table 42 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	800,739	928,154
Build New GSF	-	468,945	563,327
Renovate In Place GSF	-	73,045	73,045
Matched Convert To GSF	-	94,618	94,618
Demolition GSF	-	582,723	582,723
Total Build New Cost	$0	($452,322,724)	($536,698,310)
Total Renovate In Place Cost	$0	($25,498,121)	($25,498,121)
Total Matched Convert To Cost	$0	($38,183,515)	($38,095,258)
Total Demolition Cost	$0	($21,724,405)	($21,724,405)
Total Lease Build-Out Cost	$0	($26,487,107)	($30,746,667)
Total New Lease Cost	$0	($114,008,360)	($132,362,248)
Total Existing Lease Cost	($66,379,959)	($66,379,826)	($54,079,226)
NRM Costs for Owned Facilities	($555,873,351)	($93,480,333)	($108,355,174)
FCA Correction Cost	($102,516,686)	N/A	N/A
Estimated Base Modernization Cost	($724,769,997)	($838,084,390)	($947,559,410)
Additional Common/Lobby Space Needed (GSF)	-	164,131	197,164
Cost of Additional Common/Lobby Space	$0	($134,888,124)	($162,036,321)
Additional Parking Cost	$0	($74,572,718)	($101,724,193)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	$0	($168,447)
Seismic Correction Cost	($765,061)	$0	$0
Non-Building FCA Correction Cost	($22,922,307)	($22,922,306)	($22,922,307)
Activation Costs	$0	($128,870,405)	($130,205,028)
Estimated Additional Costs for Modernization	($23,687,368)	($361,253,553)	($417,056,295)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$23,269,879
Estimated Facilities Costs (PV)	($748,457,364)	($1,199,337,943)	($1,341,345,826)

Table 43 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($3,240,569,327)	($3,240,569,327)	($2,500,438,246)
Fixed Direct	($370,040,828)	($370,040,828)	($311,800,443)
VA Specific Direct	($101,555,903)	($101,555,903)	($89,578,469)
Indirect	($1,465,212,085)	($1,465,212,085)	($1,154,155,655)
VA Specific Indirect	($182,183,456)	($182,183,456)	($143,278,148)
Research and Education	($351,982)	($351,982)	($351,982)
VA Overhead	($285,676,957)	($285,676,957)	($223,889,505)
VA Care Operational Cost Total (PV)	($5,645,590,539)	($5,645,590,539)	($4,423,492,449)
CC Direct	($3,080,654,479)	($3,080,654,479)	($3,729,661,922)
Delivery and Operations	($137,227,094)	($137,227,094)	($161,478,313)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($148,788,608)	($148,788,608)	($175,209,889)
CC Overhead	($180,135,894)	($180,135,894)	($212,505,383)
Admin PMPM	($739,561,958)	($739,561,958)	($697,915,572)
Non-VA Care Operational Cost Total (PV)	($4,286,368,034)	($4,286,368,034)	($4,976,771,078)
Estimated Operational Costs (PV)	($9,931,958,573)	($9,931,958,573)	($9,400,263,528)

Appendix B – VISN 01 Far North: Benefits Analysis Key Data

Below are key data points used in the benefit analysis, summarized in the above Benefit Analysis section.

Demand and Supply

Inpatient

Table 44 – Demand and Supply Key Data Points for Scoring – Inpatient (IP)

Service Line	100% of FY29 In-house Bed Need	120% of FY29 In-house Bed Need	Operating Beds	Supply Adequacy (within 100-120% of in-house demand)
IP CLC	69	82	53	Under Supplied
IP Med/Surg	29	35	28	Under Supplied
IP MH	15	18	16	Adequately Supplied

Note: Community Living Center (CLC); Medicine (Med); Surgery (Surg); Mental Health (MH)

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 45 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	11	41%
Under Supplied	16	59%

Note: VA supply in the Status Quo COA is quantitatively evaluated based on the data above. It is assumed the Modernization COA scales the capacity of existing facilities up or down to meet future Veteran in-house demand. Similar to the Modernization COA, it is assumed the VA Recommendation COA scales the capacity of existing and proposed facilities up or down to meet future Veteran in-house demand. However, the VA Recommendation COA may account for factors that demand projections do not consider that may shift the future balance of in-house and community workload, such as:

- Areas with unmet Veteran demand that may warrant a net new point of care
- Low-census inpatient acute programs that may pose risks to quality and training programs, potentially warranting a shift to community providers
- Community capacity factors that may warrant changes to VA capacity

Source: Office of Productivity, Efficiency and Staffing 2019 Capacity Report

Table 46 – New Facility Demand Guidelines

Facility or Service	Guideline
Inpatient Acute VAMCs	Greater than or equal to 35,000 overlapping enrollees
Inpatient CLC	Greater than or equal to 21,000 overlapping enrollees
Health Care Center	Greater than or equal to 34,000 overlapping enrollees
MS CBOC	Greater than or equal to 4,300 non-overlapping enrollees
CBOC	Greater than or equal to 2,500 non-overlapping enrollees

Note: The above guidelines are used to determine whether a new (not replacement) point of care or service proposed in the VA recommendation had adequate demand.

Access

Table 47 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	54.2%	54.2%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	56.4%	56.4%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	77.0%	77.0%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.9%	98.9%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	98.7%	98.7%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.5%	99.5%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	54.2%	54.2%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	56.4%	56.4%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	77.0%	77.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.9%	98.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	98.7%	98.7%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.5%	99.5%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	54.2%	54.1%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	56.4%	54.1%	Decreased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	77.0%	81.8%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.9%	98.9%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	98.7%	99.2%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.5%	99.5%	Maintained within 1%

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (HPIDN) (inclusive of VA, Community Care Network, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future HPIDN. The table above shows the results for enrollee proximity to the full HPIDN as well as to VA-provided care in the market.

Source: Enrollee data from the FY19 Geocoded Enrollee File. Existing VA facility location data from VAST. Commercial provider location data from Definitive Healthcare.

Quality

Main Patient Care Facility Construction Date

Table 48 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V01) (402) Togus	1933	Yes

Source: Main patient care facility construction and renovation dates from CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Inpatient Acute Demand

Table 49 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V01) (402) Togus	IP Med	20 ADC	No	Partner (VA Delivered)
(V01) (402) Togus	IP Surg	1,600 Cases	Yes	Partner (VA Delivered)
(V01) (402) Togus	IP MH	8 ADC	Yes	Maintain

Note: The Status Quo and Modernization COAs are assumed to maintain all current facilities and services. The VA Recommendation COA proposes maintaining, partnering, and divesting of services at each facility, shown in the last column titled “VA Recommendation”. To score a 3, the VA recommendation must partner or divest of all low-demand services.

Source: FY 2029 average daily census for inpatient services is based on Enrollee Healthcare Projection Model Base Year 2019. 2019 Total Surgical Cases is from the VA National Surgery Office.

Facilities and Sustainability

Table 50 – Facilities and Sustainability Key Data Points for Scoring

Facility	Main Patient Care Facility Construction Date	Most Recent Main Patient Care Facility Renovation Date	Exceeds Useful Life?
(V01) (402) Togus	1933	2004	Yes

Note: Exceeding useful life is defined as 1) When a main patient care facility was built before 1970 it has exceeded its useful life, even if it has undergone major renovation in the last 40 years. 2) When a main patient care facility was built after 1970 but is still more than 40 years old (built on or after 1971 and before 1989), it must have undergone major renovation within the last 40 years to not exceed its useful life. 3) When a main patient care facility was built in or after 1989, it has not exceeded its useful life.

Source: From CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Table 51 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V01) Portland, ME IP Partnership	Yes

Mission

Table 52 – Mission Key Data Points for Scoring

The Status Quo and Modernization COAs are assumed to have no impact on VA's statutory missions. The impact of the VA Recommendation on VA's statutory missions is shown in the table below:

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V01) (402) Togus	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 01 North

The recommendations for modernization and realignment of VHA infrastructure submitted by the Secretary of the Department of Veterans Affairs to the Asset and Infrastructure Review (AIR) Commission are focused on allowing VA to provide accessible, timely, and high-quality health care for Veterans now and in the future. To inform the recommendations, VA conducted a Cost Benefit Analysis (CBA) that examines the cost-efficiency and benefits to Veterans of various courses of action (COAs) within each market. The CBA compares the costs and benefits associated with maintaining the current facilities, modernizing the current facilities, or strategically realigning and modernizing facilities in each market to inform the identification of a preferred COA.

The CBA aligns with requirements outlined in Section 1703C of Title 38, United States Code (U.S.C.), as added by Section 203 of the VA MISSION Act of 2018.

> *VA MISSION Act, Section 203(2)(F)*
>
> *"In making recommendations under this subsection, the Secretary shall consider…the extent and timing of potential costs and savings, including the number of years such costs or savings will be incurred, beginning with the date of completion of the proposed recommendation."*

This CBA summary document defines the COAs, provides a brief overview of the methodology, and outlines the results of the CBA and the associated sensitivity analysis.

Overview of COAs and Methodology

The Cost Benefit Analysis (CBA) reviews, analyzes, and compares the costs and benefits of three distinct courses of action (COA):

- maintaining VA's current facilities assuming no changes or additional modernization to current facilities, programs, and infrastructure (COA Name: Status Quo)
- modernizing the current facilities without strategically realigning facilities (COA Name: Modernization)
- strategically realigning and modernizing facilities (COA Name: VA Recommendation to the AIR Commission)

To evaluate these courses of action, VA examined the combined cost and benefits of each COA for each market. The CBA was conducted at the market level, rather than at the facility level, to allow for a holistic assessment of a COA's impact that considers optimization of the market across all health care facilities. The financial costs were assessed using a Present Value (PV) analysis while the non-financial benefits were assessed using a Benefits Analysis Scoring process. Ultimately, the CBA results in a Cost-Benefit Index – a simple metric by which to compare the combined cost and non-financial benefits associated with each COA. The CBI equals the total life-cycle cost (PV) of each COA in PV dollars, divided by the Benefits Analysis score for that COA's non-financial benefits normalized to the billions place. The COA with the lowest CBI score is the preferred COA.

Summary of Results

The VA Recommendation COA is the leading COA analyzed in the VISN 01 North Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (1.11) is 38.0% lower than the Status Quo COA (1.78) and 16.3% lower than the Modernization COA (1.32).

The VA Recommendation COA is $792.7 M (6.4%) more expensive than the Status Quo COA and $52.9 M (0.4%) more expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo and Modernization COAs, it also increases benefits as seen by a 12-point benefits score compared to 7 for the Status Quo COA and 10 for the Modernization COA.

The tables below detail the present values, benefit scores, and CBIs for each COA.

Table 53 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($12,476,449,621)	($13,216,286,319)	($13,269,143,753)
Benefit Analysis Score	7	10	12
CBI (Normalized in $Billions)	1.78	1.32	1.11
CBI % Change vs. Status Quo	N/A	-25.8%	-38.0%
CBI % Change vs. Modernization	N/A	N/A	-16.3%

Table 54 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($739,836,698)	($861,043,335)
Operational Cost Variance vs. Status Quo	N/A	$0	$68,349,203
Estimated Total Cost Variance vs. Status Quo	$0	($739,836,698)	($792,694,132)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($52,857,434)

Note: Operational unit costs were provided at the parent facility level not at the facility level. Therefore, the analysis does not estimate the changes in operational costs stemming from new, expanded, or removed points of care (POC). The analysis only shows changes to operational costs when a service line is shifted, at the parent facility level, from VA care to non-VA care.

Table 55 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	1
Quality	1	2	2
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**7**	**10**	**12**

VA Recommendation

The VA Recommendation for the VISN 01 North Market COA is detailed below.

- Modernize and realign the Manchester VAMC by:
  - Establishing RRTP services at the Manchester VAMC
  - Establishing a strategic collaboration to provide outpatient surgical and endoscopy services and discontinuing those services at the Manchester VAMC. If unable to enter into a strategic collaboration, consider maintaining services or referring to community providers
  - Modernizing the CLC at the Manchester VAMC
- Modernize and realign the White River Junction VAMC by converting the emergency department to an urgent care center and relocating the emergency department services to community providers
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Dover, New Hampshire
  - Establishing a new other outpatient site (OOS) in the vicinity of Montpelier, Vermont
  - Relocating all services to the proposed Dover MS CBOC and closing the Somersworth CBOC
  - Relocating all services to the proposed Dover MS CBOC and closing the Portsmouth CBOC
  - Establishing a new MS CBOC in the vicinity of St. Johnsbury, Vermont
  - Relocating all services to the proposed St. Johnsbury MS CBOC and closing the Littleton CBOC
  - Relocating all services to the proposed St. Johnsbury MS CBOC and closing the Newport CBOC
  - Relocating all services to the Keene CBOC and closing the Brattleboro CBOC
  - Relocating all services at the Conway CBOC and closing the Conway CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 01 North Market across a 30-year horizon. The cost of the VA Recommendation COA ($13.3 B) was higher than the Status Quo COA ($12.5 B) and less than the Modernization COA ($13.2 B).

For the VISN 01 North Market, the VA Recommendation COA is $792.7 M (6.4%) more expensive than the Status Quo COA and $52.9 M (0.4%) more expensive than the Modernization COA. The cost difference between the VA Recommendation COA and Status Quo COA can be attributed to new facilities, closing or modernizing existing facilities, and scaling capacity of existing facilities up or down to meet future Veteran in-house demand to accommodate changes in demand.

The table below outlines the costs associated with each of the COAs. For more detail refer to Appendix A – VISN 01 North: Capital and Operational Costs Detail.

Table 56 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($12,476,449,621)	($13,216,286,319)	($13,269,143,753)
Capital Cost Variance vs. Status Quo	N/A	($739,836,698)	($861,043,335)
Operational Cost Variance vs. Status Quo	N/A	$0	$68,349,203
Non-VA Care Operational Cost Variance	N/A	$0	($95,035,623)
VA Care Operational Cost Variance	N/A	$0	$163,384,827
Estimated Total Cost Variance vs. Status Quo	N/A	($739,836,698)	($792,694,132)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($52,857,434)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 01 North Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 57 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	1
Quality	1	2	2
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**7**	**10**	**12**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 01 North: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

Within the Demand and Supply domain, the CBA considers how each COA impacts VA's ability to meet Veteran demand in the future. Each COA is assessed on two benefit components: (1) the ability to balance demand and supply; (2) the changes to facility placement or service offerings that improve VA's ability to meet future demand.

The table below shows the scores for VISN 01 North for this domain.

Table 58 – Demand and Supply Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3

Status Quo: The COA received a score of 1 because at least one inpatient service line was over/under supplied, or more than 50% of specialties were inadequately supplied when compared to future Veteran in-house demand. Additionally, no changes to facilities or services were introduced that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, expansion of services).

Modernization: The COA received a score of 2 because, while Modernization right-sizes services to meet future Veteran in-house demand, the COA does not include changes to facilities or services that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, addition of new services).

VA Recommendation: The COA received a score of 3 because it right-sizes services to meet future Veteran enrollee demand and includes changes to facilities or services that improve VA's ability to meet future Veteran enrollee demand based on guidelines established in the CBA methodology. These changes include the following:

- Establishes a new Dover MS CBOC to provide primary care, specialty care, and outpatient mental health care services; there are 10,467 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes the new Manchester outpatient surgery partnership

Access

Within the Access domain, the CBA considers how each COA impacts Veteran access to care in the future. Each COA is assessed on the change in enrollee proximity to VA-provided primary care, specialty care, and outpatient mental health care.

The table below shows the CBA access scores for VISN 01 North for this domain.

Table 59 – Access Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Access	2	2	1

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (inclusive of VA, Community Care Network providers, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future high-performing integrated delivery network (HPIDN).

Status Quo: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

Modernization: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care.

VA Recommendation: The COA received a score of 1 because access to VA-provided primary care decreased 1% or more, specialty care increased 1% or more, and outpatient mental health care decreased 1% or more.

Quality

Within the Quality domain, the CBA considers how each COA impacts the quality of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the ability of the main patient care facilities to support modern healthcare; (2) the ability of demand to support clinical competency.

The table below shows the scores for VISN 01 North for this domain.

Table 60 – Quality Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Quality	1	2	2

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes main patient care facilities that were built prior to the emergence of modern healthcare design principles and specific standards to support modern medicine (e.g., floor-to-floor heights, corridor widths, columns spacing,

and utility infrastructure requirements). Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces aged infrastructure with modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

VA Recommendation: The COA received a score of 2 for two reasons. First, the COA replaces aged infrastructure with modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Facilities and Sustainability

Within the Facilities and Sustainability domain, the CBA considers how each COA impacts the sustainability of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the useful life of the main patient care facilities; (2) changes that strengthen VA's ability to recruit and retain providers.

The table below shows the scores for VISN 01 North for this domain.

Table 61 – Facilities and Sustainability Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	1	2	3

Note: The American Hospital Association estimates that a hospital's useful life, a measure which predicts the productive period of a typical capital asset before it becomes obsolete or needs replacement, is currently 40 years.

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes at least one main patient care facility that exceeds its useful life as defined by the American Hospital Association, indicating it may be obsolete or need replacement. Second, the COA does not include changes that strengthen VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the

coming years. Second, while the COA includes modernized infrastructure, which may attract providers, it does not include additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, in addition to modernized infrastructure which may attract providers, it also includes additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities). The COA includes the following action to support VA's ability to recruit or retain providers:

- Establishes the new Manchester outpatient surgery partnership

Mission

Within the Mission domain, the CBA considers how each COA impacts VA's ability to support its statutory missions of Education, Research, and Emergency Preparedness in the future. Each COA is assessed on three benefit components: (1) the impact on training programs; (2) the impact on research programs; (3) the impact on emergency preparedness.

A COA's overall score in the Mission domain is determined by the rounded average (unweighted) of its component (e.g., Education, Research, Emergency Preparedness) scores. The table below shows the scores for VISN 01 North for this domain.

Table 62 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	3
Research	2	2	3
Emergency Preparedness	2	2	2
Overall Mission Score (Rounded Average)	**2**	**2**	**3**

Status Quo: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market

Modernization: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market

VA Recommendation: The COA received a score of 3 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 3 because inpatient acute services remain VA-delivered and thus the COA maintains existing training programs. Additionally, the COA includes new (not replacement) infrastructure that creates new opportunities for training within the market.
- **Research:** The COA received a score of 3 because it maintains all research programs and builds new (not replacement) infrastructure to support additional research space
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market

Sensitivity Analysis

A sensitivity analyses study shows how various sources of uncertainty in a mathematical model contribute to the model's overall uncertainty. The market is considered sensitive to a scenario when the VA Recommendation is no longer the leading COA due to changes in benefit scores, VA capital costs, VA operational costs, or non-VA operational costs.

The table below outlines the sensitivity analysis scenarios completed.

Table 63 – Sensitivity Analysis Scenarios

Sensitivity Analysis Scenarios
Increase Benefit Scores for Status Quo and Modernization in increments of one from 1 to 3 points
Increase VA Capital Costs in 50% increments from 0% to 300%
Increase VA Operational Costs in 50% increments from 0% to 300%
Increase Non-VA Operational Costs in 50% increments from 0% to 300%

Sensitivity Analysis Results Summary

In the VISN 01 North Market, two scenarios changed the outcome of the CBA:

- Increasing the Modernization benefits score by two points
- Increasing the Modernization benefits score by three points

Sensitivity Analysis Full Results

The below tables show the results across all sensitivity analysis scenarios.

Table 64 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	1.78	1.32	1.11	VA Recommendation
+1	1.56	1.20	1.11	VA Recommendation
+2	1.39	1.10	1.11	Modernization
+3	1.25	1.02	1.11	Modernization

Table 65 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.78	1.32	1.11	VA Recommendation
50%	1.81	1.38	1.16	VA Recommendation
100%	1.84	1.44	1.21	VA Recommendation
150%	1.88	1.50	1.27	VA Recommendation
200%	1.91	1.56	1.32	VA Recommendation
250%	1.94	1.62	1.38	VA Recommendation
300%	1.97	1.67	1.43	VA Recommendation

Table 66 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.78	1.32	1.11	VA Recommendation
50%	2.31	1.69	1.40	VA Recommendation
100%	2.83	2.05	1.70	VA Recommendation
150%	3.35	2.42	2.00	VA Recommendation
200%	3.88	2.79	2.30	VA Recommendation
250%	4.40	3.15	2.60	VA Recommendation
300%	4.92	3.52	2.90	VA Recommendation

Table 67 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.78	1.32	1.11	VA Recommendation
50%	2.12	1.56	1.31	VA Recommendation
100%	2.46	1.79	1.51	VA Recommendation
150%	2.79	2.03	1.71	VA Recommendation
200%	3.13	2.26	1.91	VA Recommendation
250%	3.47	2.50	2.11	VA Recommendation
300%	3.80	2.74	2.31	VA Recommendation

Appendix A – VISN 01 North: Capital and Operational Costs Detail

Table 68 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	991,444	1,054,558
Build New GSF	-	401,660	448,411
Renovate In Place GSF	-	267,260	270,589
Matched Convert To GSF	-	181,943	178,614
Demolition GSF	-	392,777	392,777
Total Build New Cost	$0	($389,364,367)	($434,984,712)
Total Renovate In Place Cost	$0	($90,037,575)	($91,331,660)
Total Matched Convert To Cost	$0	($72,936,729)	($71,899,069)
Total Demolition Cost	$0	($14,471,603)	($14,471,603)
Total Lease Build-Out Cost	$0	($40,663,255)	($54,991,852)
Total New Lease Cost	$0	($125,836,768)	($169,448,483)
Total Existing Lease Cost	($28,839,038)	($28,838,951)	($16,785,470)
NRM Costs for Owned Facilities	($191,268,417)	($115,743,762)	($123,111,837)
FCA Correction Cost	($168,200,459)	N/A	N/A
Estimated Base Modernization Cost	($388,307,914)	($877,893,009)	($977,024,687)
Additional Common/Lobby Space Needed (GSF)	-	140,581	156,944
Cost of Additional Common/Lobby Space	$0	($115,648,755)	($128,583,657)
Additional Parking Cost	$0	($8,840,312)	($10,101,722)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($1,605,024)	($1,669,229)
Seismic Correction Cost	($23,854,524)	($13,405,303)	($13,405,305)
Non-Building FCA Correction Cost	($23,048,842)	($23,048,842)	($23,048,842)
Activation Costs	$0	($134,606,732)	($142,421,172)
Estimated Additional Costs for Modernization	($46,903,366)	($297,154,968)	($319,229,928)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($435,211,280)	($1,175,047,977)	($1,296,254,615)

Table 69 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($3,810,599,619)	($3,810,599,619)	($3,731,256,396)
Fixed Direct	($454,511,468)	($454,511,468)	($441,639,219)
VA Specific Direct	($126,328,722)	($126,328,722)	($125,285,421)
Indirect	($2,339,910,869)	($2,339,910,869)	($2,283,611,593)
VA Specific Indirect	($215,797,980)	($215,797,980)	($210,633,221)
Research and Education	($183,163)	($183,163)	($183,163)
VA Overhead	($377,680,728)	($377,680,728)	($369,018,708)
VA Care Operational Cost Total (PV)	($7,325,012,549)	($7,325,012,549)	($7,161,627,723)
CC Direct	($3,550,324,882)	($3,550,324,882)	($3,633,294,714)
Delivery and Operations	($157,006,110)	($157,006,110)	($161,467,227)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($164,814,930)	($164,814,930)	($170,112,533)
CC Overhead	($201,382,249)	($201,382,249)	($207,357,143)
Admin PMPM	($642,697,622)	($642,697,622)	($639,029,800)
Non-VA Care Operational Cost Total (PV)	($4,716,225,792)	($4,716,225,792)	($4,811,261,416)
Estimated Operational Costs (PV)	($12,041,238,341)	($12,041,238,341)	($11,972,889,138)

Appendix B – VISN 01 North: Benefits Analysis Key Data

Below are key data points used in the benefit analysis, summarized in the above Benefit Analysis section.

Demand and Supply

Inpatient

Table 70 – Demand and Supply Key Data Points for Scoring – Inpatient (IP)

Service Line	100% of FY29 In-house Bed Need	120% of FY29 In-house Bed Need	Operating Beds	Supply Adequacy (within 100-120% of in-house demand)
IP CLC	39	47	41	Adequately Supplied
IP Med/Surg	30	36	50	Over Supplied
IP MH	18	22	12	Under Supplied

Note: Community Living Center (CLC); Medicine (Med); Surgery (Surg); Mental Health (MH)

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 71 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	12	44%
Under Supplied	15	56%

Note: VA supply in the Status Quo COA is quantitatively evaluated based on the data above. It is assumed the Modernization COA scales the capacity of existing facilities up or down to meet future Veteran in-house demand. Similar to the Modernization COA, it is assumed the VA Recommendation COA scales the capacity of existing and proposed facilities up or down to meet future Veteran in-house demand. However, the VA Recommendation COA may account for factors that demand projections do not consider that may shift the future balance of in-house and community workload, such as:

- Areas with unmet Veteran demand that may warrant a net new point of care
- Low-census inpatient acute programs that may pose risks to quality and training programs, potentially warranting a shift to community providers
- Community capacity factors that may warrant changes to VA capacity

Source: Office of Productivity, Efficiency and Staffing 2019 Capacity Report

Table 72 – New Facility Demand Guidelines

Facility or Service	Guideline
Inpatient Acute VAMCs	Greater than or equal to 35,000 overlapping enrollees
Inpatient CLC	Greater than or equal to 21,000 overlapping enrollees
Health Care Center	Greater than or equal to 34,000 overlapping enrollees
MS CBOC	Greater than or equal to 4,300 non-overlapping enrollees
CBOC	Greater than or equal to 2,500 non-overlapping enrollees

Note: The above guidelines are used to determine whether a new (not replacement) point of care or service proposed in the VA recommendation had adequate demand.

Access

Table 73 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	72.0%	72.0%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	72.0%	72.0%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	79.4%	79.4%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.6%	99.6%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	72.0%	72.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	72.0%	72.0%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	79.4%	79.4%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.6%	99.6%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	72.0%	67.9%	Decreased 1% or more

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	72.0%	70.8%	Decreased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	79.4%	89.3%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.6%	99.6%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (HPIDN) (inclusive of VA, Community Care Network, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future HPIDN. The table above shows the results for enrollee proximity to the full HPIDN as well as to VA-provided care in the market.

Source: Enrollee data from the FY19 Geocoded Enrollee File. Existing VA facility location data from VAST. Commercial provider location data from Definitive Healthcare.

Quality

Main Patient Care Facility Construction Date

Table 74 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V01) (405) White River Junction	1974	No
(V01) (608) Manchester-New Hampshire	1949	Yes

Source: Main patient care facility construction and renovation dates from CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Inpatient Acute Demand

Table 75 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V01) (405) White River Junction	IP Med	20 ADC	No	Maintain
(V01) (405) White River Junction	IP Surg	1,600 Cases	Yes	Maintain
(V01) (405) White River Junction	IP MH	8 ADC	Yes	Maintain

Note: The Status Quo and Modernization COAs are assumed to maintain all current facilities and services. The VA Recommendation COA proposes maintaining, partnering, and divesting of services at each facility, shown in the last column titled “VA Recommendation”. To score a 3, the VA recommendation must partner or divest of all low-demand services.

Source: FY 2029 average daily census for inpatient services is based on Enrollee Healthcare Projection Model Base Year 2019. 2019 Total Surgical Cases is from the VA National Surgery Office.

Facilities and Sustainability

Table 76 – Facilities and Sustainability Key Data Points for Scoring

Facility	Main Patient Care Facility Construction Date	Most Recent Main Patient Care Facility Renovation Date	Exceeds Useful Life?
(V01) (405) White River Junction	1974	N/A	Yes
(V01) (608) Manchester-New Hampshire	1949	1997	Yes

Note: Exceeding useful life is defined as 1) When a main patient care facility was built before 1970 it has exceeded its useful life, even if it has undergone major renovation in the last 40 years. 2) When a main patient care facility was built after 1970 but is still more than 40 years old (built on or after 1971 and before 1989), it must have undergone major renovation within the last 40 years to not exceed its useful life. 3) When a main patient care facility was built in or after 1989, it has not exceeded its useful life.

Source: From CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Table 77 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V01) Manchester OP Surg Partnership	Yes

Mission

Table 78 – Mission Key Data Points for Scoring

The Status Quo and Modernization COAs are assumed to have no impact on VA's statutory missions. The impact of the VA Recommendation on VA's statutory missions is shown in the table below:

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V01) (608) Manchester-New Hampshire	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (405) White River Junction	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 01 West

The recommendations for modernization and realignment of VHA infrastructure submitted by the Secretary of the Department of Veterans Affairs to the Asset and Infrastructure Review (AIR) Commission are focused on allowing VA to provide accessible, timely, and high-quality health care for Veterans now and in the future. To inform the recommendations, VA conducted a Cost Benefit Analysis (CBA) that examines the cost-efficiency and benefits to Veterans of various courses of action (COAs) within each market. The CBA compares the costs and benefits associated with maintaining the current facilities, modernizing the current facilities, or strategically realigning and modernizing facilities in each market to inform the identification of a preferred COA.

The CBA aligns with requirements outlined in Section 1703C of Title 38, United States Code (U.S.C.), as added by Section 203 of the VA MISSION Act of 2018.

> *VA MISSION Act, Section 203(2)(F)*
>
> *"In making recommendations under this subsection, the Secretary shall consider…the extent and timing of potential costs and savings, including the number of years such costs or savings will be incurred, beginning with the date of completion of the proposed recommendation."*

This CBA summary document defines the COAs, provides a brief overview of the methodology, and outlines the results of the CBA and the associated sensitivity analysis.

Overview of COAs and Methodology

The Cost Benefit Analysis (CBA) reviews, analyzes, and compares the costs and benefits of three distinct courses of action (COA):

- maintaining VA's current facilities assuming no changes or additional modernization to current facilities, programs, and infrastructure (COA Name: Status Quo)
- modernizing the current facilities without strategically realigning facilities (COA Name: Modernization)
- strategically realigning and modernizing facilities (COA Name: VA Recommendation to the AIR Commission)

To evaluate these courses of action, VA examined the combined cost and benefits of each COA for each market. The CBA was conducted at the market level, rather than at the facility level, to allow for a holistic assessment of a COA's impact that considers optimization of the market across all health care facilities. The financial costs were assessed using a Present Value (PV) analysis while the non-financial benefits were assessed using a Benefits Analysis Scoring process. Ultimately, the CBA results in a Cost-Benefit Index – a simple metric by which to compare the combined cost and non-financial benefits associated with each COA. The CBI equals the total life-cycle cost (PV) of each COA in PV dollars, divided by the Benefits Analysis score for that COA's non-financial benefits normalized to the billions place. The COA with the lowest CBI score is the preferred COA.

Summary of Results

The VA Recommendation COA is the leading COA analyzed in the VISN 01 West Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (2.23) is 33.8% lower than the Status Quo COA (3.36) and 8.3% lower than the Modernization COA (2.43).

The VA Recommendation COA is $957.5 M (4.1%) more expensive than the Status Quo COA and $223.3 M (0.9%) more expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo and Modernization COAs, it also increases benefits as seen by an 11-point benefits score compared to 7 for the Status Quo COA and 10 for the Modernization COA.

The tables below detail the present values, benefit scores, and CBIs for each COA.

Table 79 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($23,539,147,658)	($24,273,363,301)	($24,496,690,934)
Benefit Analysis Score	7	10	11
CBI (Normalized in $Billions)	3.36	2.43	2.23
CBI % Change vs. Status Quo	N/A	-27.8%	-33.8%
CBI % Change vs. Modernization	N/A	N/A	-8.3%

Table 80 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($734,215,643)	($1,289,111,934)
Operational Cost Variance vs. Status Quo	N/A	$0	$331,568,658
Estimated Total Cost Variance vs. Status Quo	$0	($734,215,643)	($957,543,276)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($223,327,634)

Note: Operational unit costs were provided at the parent facility level not at the facility level. Therefore, the analysis does not estimate the changes in operational costs stemming from new, expanded, or removed points of care (POC). The analysis only shows changes to operational costs when a service line is shifted, at the parent facility level, from VA care to non-VA care.

Table 81 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	1
Quality	1	2	2
Facilities and Sustainability	1	2	3
Mission	2	2	2
Total Benefit Score	**7**	**10**	**11**

VA Recommendation

The VA Recommendation for the VISN 01 West Market COA is detailed below.

- Modernize and realign the Central Western Massachusetts VAMC by:
    - Relocating CLC, RRTP, and outpatient services currently provided at the Central Western Massachusetts VAMC to current or future VA facilities and discontinuing those services at the Central Western Massachusetts VAMC
    - Establishing a strategic collaboration to provide inpatient mental health services and discontinuing those services at the Central Western Massachusetts VAMC. If unable to enter into a strategic collaboration, utilize community providers
    - Relocating urgent care services to community providers and discontinuing those services at the Central Western Massachusetts VAMC
    - Closing the Central Western Massachusetts VAMC
- Modernize and realign the West Haven VAMC by:
    - Relocating CLC and RRTP services currently provided at the West Haven VAMC to current or future VA facilities and discontinuing those services at the West Haven VAMC
    - Modernizing the West Haven VAMC
- Modernize and realign the Newington MS CBOC by:
    - Establishing a new CLC at the existing Newington MS CBOC
    - Establishing a new RRTP at the existing Newington MS CBOC
- Modernize and realign outpatient facilities in the market by:
    - Relocating the Winsted CBOC to a new site in the vicinity of Torrington, Connecticut and closing the existing Winsted CBOC
    - Relocating the Stamford CBOC to a new site in the vicinity of Norwalk, Connecticut and closing the existing Stamford CBOC
    - Relocating the Springfield MS CBOC to a new site in the vicinity of Springfield, Massachusetts and closing the existing Springfield MS CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 01 West Market across a 30-year horizon. The cost of the VA Recommendation COA ($24.5 B) was higher than the Status Quo COA ($23.5 B) and the Modernization COA ($24.3 B).

For the VISN 01 West Market, the VA Recommendation COA $957.5 M (4.1%) more expensive than the Status Quo COA and $223.3 M (0.9%) more expensive than the Modernization COA. The cost difference between the VA Recommendation COA and Status Quo COA can be attributed to new facilities, closing or modernizing existing facilities, and scaling capacity of existing facilities up or down to meet future Veteran in-house demand to accommodate changes in demand.

The table below outlines the costs associated with each of the COAs. For more detail refer to Appendix A – VISN 01 West: Capital and Operational Costs Detail.

Table 82 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($23,539,147,658)	($24,273,363,301)	($24,496,690,934)
Capital Cost Variance vs. Status Quo	N/A	($734,215,643)	($1,289,111,934)
Operational Cost Variance vs. Status Quo	N/A	$0	$331,568,658
Non-VA Care Operational Cost Variance	N/A	$0	($239,356,190)
VA Care Operational Cost Variance	N/A	$0	$570,924,848
Estimated Total Cost Variance vs. Status Quo	$0	($734,215,643)	($957,543,276)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($223,327,634)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 01 West Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 83 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Access	2	2	1
Quality	1	2	2
Facilities and Sustainability	1	2	3
Mission	2	2	2
Total Benefit Score	**7**	**10**	**11**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 01 West: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

Within the Demand and Supply domain, the CBA considers how each COA impacts VA's ability to meet Veteran demand in the future. Each COA is assessed on two benefit components: (1) the ability to balance demand and supply; (2) the changes to facility placement or service offerings that improve VA's ability to meet future demand.

The table below shows the scores for VISN 01 West for this domain.

Table 84 – Demand and Supply Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3

Status Quo: The COA received a score of 1 because at least one inpatient service line was over/under supplied, or more than 50% of specialties were inadequately supplied when compared to future Veteran in-house demand. Additionally, no changes to facilities or services were introduced that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, expansion of services).

Modernization: The COA received a score of 2 because, while Modernization right-sizes services to meet future Veteran in-house demand, the COA does not include changes to facilities or services that improve VA's ability to meet the future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, addition of new services).

VA Recommendation: The COA received a score of 3 because it right-sizes services to meet future Veteran enrollee demand and includes changes to facilities or services that improve VA's ability to meet future Veteran enrollee demand based on guidelines established in the CBA methodology. These changes include the following:

- Establishes a new Norwalk CBOC to provide primary care and outpatient mental health services; there are 3,264 enrollees for which the proposed facility is the closest VA point of care within 30 minutes

- Establishes a new Torrington CBOC to provide primary care and outpatient mental health services; there are 3,406 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Expands the Fitchburg CBOC to a MS CBOC, adding specialty care services
- Expands the Newington MS CBOC to a VAMC, adding CLC and RRTP services
- Expands the Waterbury CBOC to a MS CBOC, adding specialty care services
- Expands the New London CBOC to a MS CBOC, adding specialty care services
- Establishes the new Hartford outpatient surgery partnership

Access

Within the Access domain, the CBA considers how each COA impacts Veteran access to care in the future. Each COA is assessed on the change in enrollee proximity to VA-provided primary care, specialty care, and outpatient mental health care.

The table below shows the CBA access scores for VISN 01 West for this domain.

Table 85 – Access Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Access	2	2	1

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (inclusive of VA, Community Care Network providers, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future high-performing integrated delivery network (HPIDN).

Status Quo: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care

Modernization: The COA received a score of 2 because access is maintained within 1% for VA-provided primary care, specialty care, and outpatient mental health care

VA Recommendation: The COA received a score of 1 because access to VA-provided primary care was maintained within 1%, specialty care decreased 1% or more, and outpatient mental health care was maintained within 1%

Quality

Within the Quality domain, the CBA considers how each COA impacts the quality of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the ability of the main patient care facilities to support modern healthcare; (2) the ability of demand to support clinical competency.

The table below shows the scores for VISN 01 West for this domain.

Table 86 – Quality Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Quality	1	2	2

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes main patient care facilities that were built prior to the emergence of modern healthcare design principles and specific standards to support modern medicine (e.g., floor-to-floor heights, corridor widths, columns spacing, and utility infrastructure requirements). Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces aged infrastructure with modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

VA Recommendation: The COA received a score of 2 for two reasons. First, the COA replaces aged infrastructure with modern facilities that meet modern health care design standards. Modern facilities support current standards of care (e.g., PACT-enabled environment in the outpatient setting, single patient rooms in the inpatient setting) and utilization of technologies. They can also improve the experience for both Veterans and staff. Second, the COA includes facilities with projected future demand below VA planning guidelines for maintaining programs. VA's planning guidelines reflect that sufficient volume and diversity of cases are required for all members of the care team to maintain proficiency and quality care delivery.

Facilities and Sustainability

Within the Facilities and Sustainability domain, the CBA considers how each COA impacts the sustainability of Veteran care in the future. Each COA is assessed based on two benefit components: (1) the useful life of the main patient care facilities; (2) changes that strengthen VA's ability to recruit and retain providers.

The table below shows the scores for VISN 01 West for this domain.

Table 87 – Facilities and Sustainability Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	1	2	3

Note: The American Hospital Association estimates that a hospital's useful life, a measure which predicts the productive period of a typical capital asset before it becomes obsolete or needs replacement, is currently 40 years.

Status Quo: The COA received a score of 1 for two reasons. First, the COA includes at least one main patient care facility that exceeds its useful life as defined by the American Hospital Association, indicating it may be obsolete or need replacement. Second, the COA does not include changes that strengthen VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

Modernization: The COA received a score of 2 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, while the COA includes modernized infrastructure, which may attract providers, it does not include additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities).

VA Recommendation: The COA received a score of 3 for two reasons. First, the COA replaces all main patient care facilities that have exceeded their useful life with modern facilities that can be sustained over the coming years. Second, in addition to modernized infrastructure which may attract providers, it also includes additional changes to support VA's ability to recruit or retain providers (e.g., relocation of VA facilities closer to health care hubs based on Hospital Referral Regions; new or expanded partnerships between VA and academic affiliates, other Federal facilities, or community facilities). The COA includes the following action to support VA's ability to recruit or retain providers:

- Establishes the new Hartford outpatient surgery partnership

Mission

Within the Mission domain, the CBA considers how each COA impacts VA's ability to support its statutory missions of Education, Research, and Emergency Preparedness in the future. Each COA is assessed on three benefit components: (1) the impact on training programs; (2) the impact on research programs; (3) the impact on emergency preparedness.

A COA's overall score in the Mission domain is determined by the rounded average (unweighted) of its component (e.g., Education, Research, Emergency Preparedness) scores. The table below shows the scores for VISN 01 West for this domain.

Table 88 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	1
Research	2	2	3
Emergency Preparedness	2	2	2
Overall Mission Score (Rounded Average)	**2**	**2**	**2**

Status Quo: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Modernization: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 2 because it does not impact inpatient acute service lines and thus maintains existing training programs.
- **Research:** The COA received a score of 2 because all existing facilities with research programs are maintained.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

VA Recommendation: The COA received a score of 2 (rounded average of scores across Education, Research, and Emergency Preparedness).

- **Education:** The COA received a score of 1 because it impacts inpatient acute service lines and thus introduces risk to existing training programs.
- **Research:** The COA received a score of 3 because it maintains all research programs and builds new (not replacement) infrastructure to support additional research space.
- **Emergency Preparedness:** The COA received a score of 2 because it maintains the current count of Primary Receiving Center-designated VAMCs in the market.

Sensitivity Analysis

A sensitivity analyses study shows how various sources of uncertainty in a mathematical model contribute to the model's overall uncertainty. The market is considered sensitive to a scenario when the VA Recommendation is no longer the leading COA due to changes in benefit scores, VA capital costs, VA operational costs, or non-VA operational costs.

The table below outlines the sensitivity analysis scenarios completed.

Table 89 – Sensitivity Analysis Scenarios

Sensitivity Analysis Scenarios
Increase Benefit Scores for Status Quo and Modernization in increments of one from 1 to 3 points
Increase VA Capital Costs in 50% increments from 0% to 300%
Increase VA Operational Costs in 50% increments from 0% to 300%
Increase Non-VA Operational Costs in 50% increments from 0% to 300%

Sensitivity Analysis Results Summary

In the VISN 01 West Market, three scenarios changed the outcome of the CBA:

- Increasing the Modernization benefits score by one point
- Increasing the Modernization benefits score by two points
- Increasing the Modernization benefits score by three points

Sensitivity Analysis Full Results

The below tables show the results across all sensitivity analysis scenarios.

Table 90 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	3.36	2.43	2.23	VA Recommendation
+1	2.94	2.21	2.23	Modernization
+2	2.62	2.02	2.23	Modernization
+3	2.35	1.87	2.23	Modernization

Table 91 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	3.36	2.43	2.23	VA Recommendation
50%	3.55	2.59	2.40	VA Recommendation
100%	3.73	2.76	2.58	VA Recommendation
150%	3.91	2.92	2.75	VA Recommendation
200%	4.09	3.09	2.93	VA Recommendation
250%	4.28	3.25	3.10	VA Recommendation

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	4.46	3.41	3.28	VA Recommendation

Table 92 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	3.36	2.43	2.23	VA Recommendation
50%	4.45	3.19	2.89	VA Recommendation
100%	5.54	3.95	3.56	VA Recommendation
150%	6.63	4.71	4.23	VA Recommendation
200%	7.72	5.47	4.89	VA Recommendation
250%	8.80	6.24	5.56	VA Recommendation
300%	9.89	7.00	6.23	VA Recommendation

Table 93 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	3.36	2.43	2.23	VA Recommendation
50%	3.77	2.71	2.50	VA Recommendation
100%	4.18	3.00	2.77	VA Recommendation

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
150%	4.59	3.29	3.04	VA Recommendation
200%	5.00	3.58	3.32	VA Recommendation
250%	5.41	3.86	3.59	VA Recommendation
300%	5.83	4.15	3.86	VA Recommendation

Appendix A – VISN 01 West: Capital and Operational Costs Detail

Table 94 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	2,237,667	2,368,438
Build New GSF	-	1,383,238	1,516,708
Renovate In Place GSF	-	194,116	185,406
Matched Convert To GSF	-	176,180	135,476
Demolition GSF	-	1,755,096	1,845,428
Total Build New Cost	$0	($1,507,674,625)	($1,654,902,133)
Total Renovate In Place Cost	$0	($69,695,295)	($75,799,207)
Total Matched Convert To Cost	$0	($80,685,354)	($63,033,889)
Total Demolition Cost	$0	($73,533,155)	($64,569,016)
Total Lease Build-Out Cost	$0	($55,923,105)	($127,701,185)
Total New Lease Cost	$0	($225,532,553)	($540,481,221)
Total Existing Lease Cost	($82,555,282)	($82,555,122)	($63,338,503)
NRM Costs for Owned Facilities	($1,892,237,839)	($261,231,125)	($276,497,614)
FCA Correction Cost	($509,470,565)	N/A	N/A
Estimated Base Modernization Cost	($2,484,263,687)	($2,356,830,333)	($2,866,322,769)
Additional Common/Lobby Space Needed (GSF)	-	484,133	530,848
Cost of Additional Common/Lobby Space	$0	($448,655,097)	($495,346,442)
Additional Parking Cost	$0	($48,232,557)	($64,927,610)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($9,008,462)	($10,496,294)
Seismic Correction Cost	($11,103,136)	($529,910)	($529,910)
Non-Building FCA Correction Cost	($61,435,868)	($61,435,867)	($41,904,932)
Activation Costs	$0	($366,326,108)	($366,386,668)
Estimated Additional Costs for Modernization	($72,539,005)	($934,188,001)	($979,591,857)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($2,556,802,691)	($3,291,018,334)	($3,845,914,625)

Table 95 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($7,253,005,656)	($7,253,005,656)	($6,989,736,230)
Fixed Direct	($815,525,561)	($815,525,561)	($782,395,702)
VA Specific Direct	($675,122,961)	($675,122,961)	($657,168,602)
Indirect	($4,970,192,341)	($4,970,192,341)	($4,766,040,775)
VA Specific Indirect	($700,254,216)	($700,254,216)	($679,155,910)
Research and Education	($63,473,975)	($63,473,975)	($62,286,066)
VA Overhead	($759,240,346)	($759,240,346)	($729,106,923)
VA Care Operational Cost Total (PV)	($15,236,815,057)	($15,236,815,057)	($14,665,890,209)
CC Direct	($4,371,149,745)	($4,371,149,745)	($4,590,473,383)
Delivery and Operations	($169,870,133)	($169,870,133)	($179,380,415)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($166,047,379)	($166,047,379)	($176,845,716)
CC Overhead	($227,348,238)	($227,348,238)	($240,087,214)
Admin PMPM	($811,114,415)	($811,114,415)	($798,099,372)
Non-VA Care Operational Cost Total (PV)	($5,745,529,910)	($5,745,529,910)	($5,984,886,100)
Estimated Operational Costs (PV)	($20,982,344,967)	($20,982,344,967)	($20,650,776,309)

Appendix B – VISN 01 West: Benefits Analysis Key Data

Below are key data points used in the benefit analysis, summarized in the above Benefit Analysis section.

Demand and Supply

Inpatient

Table 96 – Demand and Supply Key Data Points for Scoring – Inpatient (IP)

Service Line	100% of FY29 In-house Bed Need	120% of FY29 In-house Bed Need	Operating Beds	Supply Adequacy (within 100-120% of in-house demand)
IP CLC	48	58	66	Over Supplied
IP Med/Surg	42	51	62	Over Supplied
IP MH	31	37	101	Over Supplied

Note: Community Living Center (CLC); Medicine (Med); Surgery (Surg); Mental Health (MH)

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 97 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	15	56%
Under Supplied	12	44%

Note: VA supply in the Status Quo COA is quantitatively evaluated based on the data above. It is assumed the Modernization COA scales the capacity of existing facilities up or down to meet future Veteran in-house demand. Similar to the Modernization COA, it is assumed the VA Recommendation COA scales the capacity of existing and proposed facilities up or down to meet future Veteran in-house demand. However, the VA Recommendation COA may account for factors that demand projections do not consider that may shift the future balance of in-house and community workload, such as:

- Areas with unmet Veteran demand that may warrant a net new point of care
- Low-census inpatient acute programs that may pose risks to quality and training programs, potentially warranting a shift to community providers
- Community capacity factors that may warrant changes to VA capacity

Source: Office of Productivity, Efficiency and Staffing 2019 Capacity Report

Table 98 – New Facility Demand Guidelines

Facility or Service	Guideline
Inpatient Acute VAMCs	Greater than or equal to 35,000 overlapping enrollees
Inpatient CLC	Greater than or equal to 21,000 overlapping enrollees
Health Care Center	Greater than or equal to 34,000 overlapping enrollees
MS CBOC	Greater than or equal to 4,300 non-overlapping enrollees
CBOC	Greater than or equal to 2,500 non-overlapping enrollees

Note: The above guidelines are used to determine whether a new (not replacement) point of care or service proposed in the VA recommendation had adequate demand.

Access

Table 99 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	91.5%	91.5%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	91.7%	91.7%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.1%	99.1%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	100.0%	100.0%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	100.0%	100.0%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	91.5%	91.5%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	91.7%	91.7%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.1%	99.1%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	91.5%	90.7%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	91.7%	90.8%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.1%	97.9%	Decreased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%

Note: the CBA Access domain score is based on enrollee proximity to VA-provided care only rather than the full high-performing integrated delivery network (HPIDN) (inclusive of VA, Community Care Network, and non-Community Care Network providers meeting quality criteria). While a COA may have a reduced access score within the CBA, the Section 203 Criteria analysis shows that the VA Recommendation COA maintains or improves access to all service lines in the future HPIDN. The table above shows the results for enrollee proximity to the full HPIDN as well as to VA-provided care in the market.

Source: Enrollee data from the FY19 Geocoded Enrollee File. Existing VA facility location data from VAST. Commercial provider location data from Definitive Healthcare.

Quality

Main Patient Care Facility Construction Date

Table 100 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V01) (631) Central Western Massachusetts	1923	Yes
(V01) (689) West Haven	1955	Yes
(V01) (689A4) Newington	1955	Yes

Source: Main patient care facility construction and renovation dates from CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Inpatient Acute Demand

Table 101 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V01) (631) Central Western Massachusetts	IP Med	20 ADC	No Service	N/A
(V01) (631) Central Western Massachusetts	IP Surg	1,600 Cases	No Service	N/A
(V01) (631) Central Western Massachusetts	IP MH	8 ADC	No	Partner (AA)
(V01) (689) West Haven	IP Med	20 ADC	Yes	Maintain
(V01) (689) West Haven	IP Surg	1,600 Cases	No	Maintain
(V01) (689) West Haven	IP MH	8 ADC	Yes	Maintain

Note: The Status Quo and Modernization COAs are assumed to maintain all current facilities and services. The VA Recommendation COA proposes maintaining, partnering, and divesting of services at each facility, shown in the last column titled “VA Recommendation”. To score a 3, the VA recommendation must partner or divest of all low-demand services.

Source: FY 2029 average daily census for inpatient services is based on Enrollee Healthcare Projection Model Base Year 2019. 2019 Total Surgical Cases is from the VA National Surgery Office.

Facilities and Sustainability

Table 102 – Facilities and Sustainability Key Data Points for Scoring

Facility	Main Patient Care Facility Construction Date	Most Recent Main Patient Care Facility Renovation Date	Exceeds Useful Life?
(V01) (631) Central Western Massachusetts	1923	1978	Yes
(V01) (689) West Haven	1955	1999	Yes
(V01) (689A4) Newington	1955	1999	Yes

Note: Exceeding useful life is defined as 1) When a main patient care facility was built before 1970 it has exceeded its useful life, even if it has undergone major renovation in the last 40 years. 2) When a main patient care facility was built after 1970 but is still more than 40 years old (built on or after 1971 and before 1989), it must have undergone major renovation within the last 40 years to not exceed its useful life. 3) When a main patient care facility was built in or after 1989, it has not exceeded its useful life.

Source: From CAI Buildings and FCA Condition Gaps Reports 9-14-2020

Table 103 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V01) Hartford OP Surg Partnership	Yes

Mission

Table 104 – Mission Key Data Points for Scoring

The Status Quo and Modernization COAs are assumed to have no impact on VA's statutory missions. The impact of the VA Recommendation on VA's statutory missions is shown in the table below:

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V01) (631) Central Western Massachusetts	Deactivates IP Acute Service with training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V01) (689) West Haven	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities