VA Recommendations to the

ASSET AND INFRASTRUCTURE REVIEW COMMISSION

March 2022

Appendix H

Cost Benefit Analysis – VISN 05

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VISN 05 Baltimore

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 05 Baltimore Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (1.50) is 39.4% lower than the Status Quo COA (2.47) and 19.9% lower than the Modernization COA (1.87).

The VA Recommendation COA is $1.2 B (6.1%) more expensive than the Status Quo COA and $406.3 M (2.0%) 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 14-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 ($)	($19,757,325,453)	($20,554,596,748)	($20,960,937,024)
Benefit Analysis Score	8	11	14
CBI (Normalized in $Billions)	2.47	1.87	1.50
CBI % Change vs. Status Quo	N/A	-24.3%	-39.4%
CBI % Change vs. Modernization	N/A	N/A	-19.9%

Table 2 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($797,271,295)	($1,203,611,570)
Operational Cost Variance vs. Status Quo	N/A	$0	$0
Estimated Total Cost Variance vs. Status Quo	N/A	($797,271,295)	($1,203,611,570)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($406,340,275)

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 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	2
Mission	2	2	3
Total Benefit Score	**8**	**11**	**14**

VA Recommendation

The VA Recommendation for the VISN 05 Baltimore Market COA is detailed below.

- Modernize and realign the Baltimore VAMC by:
  - Modernizing the operating rooms at the Baltimore VAMC
  - Relocating select primary care, outpatient mental health, and outpatient specialty care services to current or future VA facilities
- Modernize and realign the Perry Point VAMC by:
  - Modernizing the CLC at the Perry Point VAMC
  - Modernizing the RRTP at the Perry Point VAMC
  - Relocating urgent care services at the Perry Point VAMC to community providers and discontinuing those services at the Perry Point VAMC
- Modernize the CLC at the Loch Raven VAMC
- Modernize and realign the outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Westminster, Maryland
  - Establishing a new CBOC in the vicinity of Bel Air, Maryland
  - Establishing a new CBOC in the vicinity of Baltimore, Maryland
  - Relocating the Glen Burnie MS CBOC to a new site in the vicinity of Glen Burnie, Maryland and closing the existing Glen Burnie MS CBOC
  - Relocating the Cambridge MS CBOC to a new site in the vicinity of Cambridge, Maryland and closing the existing Cambridge MS CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Baltimore Market across a 30-year horizon. The cost of the VA Recommendation COA ($21.0 B) was higher than the Status Quo COA ($19.8 B) and the Modernization COA ($20.6 B).

For the VISN 05 Baltimore Market, the VA Recommendation COA is $1.2 B (6.1%) more expensive than the Status Quo COA and $406.3 M (2.0%) 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 05 Baltimore: Capital and Operational Costs Detail.

Table 4 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($19,757,325,453)	($20,554,596,748)	($20,960,937,024)
Capital Cost Variance vs. Status Quo	N/A	($797,271,295)	($1,203,611,570)
Operational Cost Variance vs. Status Quo	N/A	$0	$0
Non-VA Care Operational Cost Variance	N/A	$0	$0
VA Care Operational Cost Variance	N/A	$0	$0
Estimated Total Cost Variance vs. Status Quo	N/A	($797,271,295)	($1,203,611,570)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($406,340,275)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Baltimore 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	2
Mission	2	2	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Total Benefit Score	**8**	**11**	**14**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 05 Baltimore: 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 05 Baltimore 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 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 Baltimore County CBOC to provide primary care and outpatient mental health services; there are 11,164 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Carroll County MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 4,337 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new Harford County CBOC to provide primary care and outpatient mental health services; there are 5,349 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Expands the Eastern Baltimore County-Rosedale CBOC to a MS CBOC, adding specialty care services.

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 05 Baltimore 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 increased 1% or more, 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 05 Baltimore 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 05 Baltimore for this domain.

Table 9 – Facilities and Sustainability Scoring Summary

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

Note: The American Hospital Association (AHA) 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 AHA, 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 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).

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 05 Baltimore 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 05 Baltimore Market, one scenario changed the outcome of the CBA:

- Increasing the Modernization benefits score by three points

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	2.47	1.87	1.50	VA Recommendation
+1	2.20	1.71	1.50	VA Recommendation
+2	1.98	1.58	1.50	VA Recommendation
+3	1.80	1.47	1.50	Modernization

Table 13 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	2.47	1.87	1.50	VA Recommendation
50%	2.57	1.98	1.60	VA Recommendation
100%	2.68	2.09	1.70	VA Recommendation
150%	2.78	2.20	1.80	VA Recommendation
200%	2.88	2.31	1.91	VA Recommendation
250%	2.99	2.43	2.01	VA Recommendation
300%	3.09	2.54	2.11	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%	2.47	1.87	1.50	VA Recommendation
50%	3.36	2.51	2.01	VA Recommendation
100%	4.25	3.16	2.51	VA Recommendation
150%	5.14	3.81	3.02	VA Recommendation
200%	6.02	4.45	3.53	VA Recommendation
250%	6.91	5.10	4.04	VA Recommendation
300%	7.80	5.75	4.54	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%	2.47	1.87	1.50	VA Recommendation
50%	2.71	2.05	1.64	VA Recommendation
100%	2.96	2.22	1.77	VA Recommendation
150%	3.20	2.40	1.91	VA Recommendation
200%	3.44	2.57	2.05	VA Recommendation
250%	3.68	2.75	2.19	VA Recommendation
300%	3.93	2.93	2.33	VA Recommendation

Appendix A – VISN 05 Baltimore: Capital and Operational Costs Detail

Table 16 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	2,342,639	2,478,526
Build New GSF	-	890,226	990,883
Renovate In Place GSF	-	679,606	673,554
Matched Convert To GSF	-	461,228	467,280
Demolition GSF	-	1,098,140	1,098,140
Total Build New Cost	$0	($861,951,795)	($964,749,353)
Total Renovate In Place Cost	$0	($262,008,627)	($259,560,025)
Total Matched Convert To Cost	$0	($196,772,091)	($198,941,933)
Total Demolition Cost	$0	($39,624,694)	($39,624,694)
Total Lease Build-Out Cost	$0	($18,446,960)	($62,193,481)
Total New Lease Cost	$0	($80,090,358)	($270,080,974)
Total Existing Lease Cost	($66,434,438)	($66,434,391)	($53,554,187)
NRM Costs for Owned Facilities	($1,216,996,414)	($273,485,807)	($289,349,604)
FCA Correction Cost	($267,755,253)	N/A	N/A
Estimated Base Modernization Cost	($1,551,186,105)	($1,798,814,723)	($2,138,054,251)
Additional Common/Lobby Space Needed (GSF)	-	311,579	346,809
Cost of Additional Common/Lobby Space	$0	($250,268,658)	($278,512,903)
Additional Parking Cost	$0	($114,719,475)	($133,950,383)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($3,806,170)	($4,279,921)
Seismic Correction Cost	($80,243,724)	($17,209,246)	($17,209,247)
Non-Building FCA Correction Cost	($22,602,191)	($22,602,189)	($22,602,191)
Activation Costs	$0	($243,882,855)	($263,034,696)
Estimated Additional Costs for Modernization	($102,845,915)	($652,488,593)	($719,589,340)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($1,654,032,021)	($2,451,303,316)	($2,857,643,591)

Table 17 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($7,482,516,854)	($7,482,516,854)	($7,482,516,854)
Fixed Direct	($918,138,467)	($918,138,467)	($918,138,467)
VA Specific Direct	($386,164,832)	($386,164,832)	($386,164,832)
Indirect	($4,039,707,597)	($4,039,707,597)	($4,039,707,597)
VA Specific Indirect	($576,588,622)	($576,588,622)	($576,588,622)
Research and Education	($100,829,769)	($100,829,769)	($100,829,769)
VA Overhead	($714,463,547)	($714,463,547)	($714,463,547)
VA Care Operational Cost Total (PV)	($14,218,409,687)	($14,218,409,687)	($14,218,409,687)
CC Direct	($2,848,836,806)	($2,848,836,806)	($2,848,836,806)
Delivery and Operations	($121,280,118)	($121,280,118)	($121,280,118)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($117,365,466)	($117,365,466)	($117,365,466)
CC Overhead	($153,873,135)	($153,873,135)	($153,873,135)
Admin PMPM	($643,528,221)	($643,528,221)	($643,528,221)
Non-VA Care Operational Cost Total (PV)	($3,884,883,746)	($3,884,883,746)	($3,884,883,746)
Estimated Operational Costs (PV)	($18,103,293,433)	($18,103,293,433)	($18,103,293,433)

Appendix B – VISN 05 Baltimore: 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	216	259	289	Over Supplied
IP Med/Surg	68	81	128	Over Supplied
IP MH	24	28	18	Under 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	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 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	84.8%	84.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	84.8%	84.8%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	97.5%	97.5%	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	99.6%	99.6%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.8%	99.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	84.8%	84.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	84.8%	84.8%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	97.5%	97.5%	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	99.6%	99.6%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.8%	99.8%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	84.8%	91.3%	Increased 1% or more

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	84.8%	91.3%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	97.5%	98.7%	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	99.6%	99.6%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.8%	99.8%	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?
(V05) (512) Baltimore-Maryland	1992	No
(V05) (512A5) Perry Point	1942	Yes
(V05) (512GD) Loch Raven	1996	No

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
(V05) (512) Baltimore	IP Med	20 ADC	Yes	Maintain
(V05) (512) Baltimore	IP Surg	1,600 Cases	Yes	Maintain
(V05) (512) Baltimore	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?
(V05) (512) Baltimore-Maryland	1992	2012	No
(V05) (512A5) Perry Point	1942	1999	Yes
(V05) (512GD) Loch Raven	1996	N/A	No

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?
N/A	N/A

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
(V05) (512) Baltimore	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 05 Martinsburg

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 05 Martinsburg Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (1.02) is 24.5% lower than the Status Quo COA (1.35) and 8.7% lower than the Modernization COA (1.11).

The VA Recommendation COA is $411.7 M (3.8%) more expensive than the Status Quo COA and $53.0 M (0.5%) 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 11-point benefits score compared to 8 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 ($)	($10,776,325,788)	($11,134,967,535)	($11,188,010,559)
Benefit Analysis Score	8	10	11
CBI (Normalized in $Billions)	1.35	1.11	1.02
CBI % Change vs. Status Quo	N/A	-17.3%	-24.5%
CBI % Change vs. Modernization	N/A	N/A	-8.7%

Table 28 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs Status Quo	N/A	($358,641,747)	($411,684,771)
Operational Cost Variance vs Status Quo	N/A	$0	$0
Estimated Total Cost Variance vs Status Quo	N/A	($358,641,747)	($411,684,771)
Estimated Total Cost Variance vs Modernization	N/A	N/A	($53,043,024)

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 the 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	2
Access	2	2	3
Quality	2	2	2
Facilities and Sustainability	1	2	2
Mission	2	2	2
Total Benefit Score	**8**	**10**	**11**

VA Recommendation

The VA Recommendation for the VISN 05 Martinsburg Market COA is detailed below.

- Modernize and realign outpatient facilities in the market by:
  - Relocating the Hagerstown CBOC to a new site in the vicinity of Hagerstown, Maryland, and closing the current Hagerstown CBOC
  - Relocating all services at the Franklin OOS and closing the Franklin OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Martinsburg Market across a 30-year horizon. The cost of the VA Recommendation COA ($11.2 B) was higher than the Status Quo COA ($10.8 B) and the Modernization COA ($11.1 B).

For the VISN 05 Martinsburg Market, the VA Recommendation COA is $411.7 M (3.8%) more expensive than the Status Quo COA and $53.0 M (0.5%) 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 05 Martinsburg: Capital and Operational Costs Detail.

Table 30 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($10,776,325,788)	($11,134,967,535)	($11,188,010,559)
Capital Cost Variance vs Status Quo	N/A	($358,641,747)	($411,684,771)

	Status Quo	Modernization	VA Recommendation
Operational Cost Variance vs Status Quo	N/A	$0	$0
Non-VA Care Operational Cost Variance	N/A	$0	$0
VA Care Operational Cost Variance	N/A	$0	$0
Estimated Total Cost Variance vs Status Quo	N/A	($358,641,747)	($411,684,771)
Estimated Total Cost Variance vs Modernization	N/A	N/A	($53,043,024)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Martinsburg 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	2
Access	2	2	3
Quality	2	2	2
Facilities and Sustainability	1	2	2
Mission	2	2	2
Total Benefit Score	**8**	**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 05 Martinsburg: 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 05 Martinsburg for this domain.

Table 32 – Demand and Supply Scoring Summary

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

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 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 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 2 because, while the COA 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 future Veteran enrollee population (e.g., relocation or establishment of facilities in areas with greater Veteran demand, expansion of services).

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 05 Martinsburg for this domain.

Table 33 – 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 was maintained within 1%, 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 05 Martinsburg for this domain.

Table 34 – Quality Scoring Summary

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

Status Quo: The COA received a score of 2 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 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 05 Martinsburg for this domain.

Table 35 – Facilities and Sustainability Scoring Summary

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

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 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).

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 05 Martinsburg for this domain.

Table 36 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	2
Research	2	2	2
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 2 because inpatient acute services remain VA-delivered and thus the COA 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.

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 05 Martinsburg 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 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	1.35	1.11	1.02	VA Recommendation
+1	1.20	1.01	1.02	Modernization
+2	1.08	0.93	1.02	Modernization
+3	0.98	0.86	1.02	Modernization

Table 39 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	1.35	1.11	1.02	VA Recommendation
50%	1.41	1.18	1.08	VA Recommendation
100%	1.48	1.25	1.15	VA Recommendation
150%	1.54	1.32	1.21	VA Recommendation
200%	1.60	1.39	1.28	VA Recommendation
250%	1.67	1.46	1.34	VA Recommendation
300%	1.73	1.53	1.41	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%	1.35	1.11	1.02	VA Recommendation
50%	1.83	1.50	1.37	VA Recommendation
100%	2.30	1.88	1.71	VA Recommendation
150%	2.78	2.26	2.06	VA Recommendation
200%	3.26	2.65	2.41	VA Recommendation
250%	3.74	3.03	2.76	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	4.22	3.41	3.11	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%	1.35	1.11	1.02	VA Recommendation
50%	1.48	1.22	1.11	VA Recommendation
100%	1.61	1.32	1.21	VA Recommendation
150%	1.74	1.43	1.30	VA Recommendation
200%	1.87	1.53	1.40	VA Recommendation
250%	2.00	1.64	1.49	VA Recommendation
300%	2.13	1.74	1.59	VA Recommendation

Appendix A – VISN 05 Martinsburg: Capital and Operational Costs Detail

Table 42 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	1,550,722	1,601,793
Build New GSF	-	481,637	518,281
Renovate In Place GSF	-	507,685	499,325
Matched Convert To GSF	-	392,827	402,789
Demolition GSF	-	297,055	297,055
Total Build New Cost	$0	($458,615,275)	($489,444,342)
Total Renovate In Place Cost	$0	($159,663,330)	($155,723,319)
Total Matched Convert To Cost	$0	($148,213,421)	($151,597,482)
Total Demolition Cost	$0	($10,497,665)	($10,497,665)
Total Lease Build-Out Cost	$0	($24,707,553)	($25,164,444)
Total New Lease Cost	$0	($72,110,534)	($73,444,074)
Total Existing Lease Cost	($19,016,074)	($19,016,017)	($14,654,224)
NRM Costs for Owned Facilities	($812,594,977)	($181,035,330)	($186,997,539)
FCA Correction Cost	($176,139,197)	N/A	N/A
Estimated Base Modernization Cost	($1,007,750,248)	($1,073,859,126)	(1,107,523,090)
Additional Common/Lobby Space Needed (GSF)	-	168,573	181,398
Cost of Additional Common/Lobby Space	$0	($131,323,305)	(141,314,671)
Additional Parking Cost	$0	($6,968,325)	(8,480,229)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($2,511,481)	(2,889,670)
Seismic Correction Cost	$0	$0	$0
Non-Building FCA Correction Cost	($17,795,192)	($17,795,192)	(17,795,192)
Activation Costs	$0	($151,729,759)	(159,227,359)
Estimated Additional Costs for Modernization	($17,795,192)	($310,328,062)	(329,707,121)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($1,025,545,440)	($1,384,187,187)	(1,437,230,211)

Table 43 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($4,395,430,318)	($4,395,430,318)	(4,395,430,318)
Fixed Direct	($387,489,122)	($387,489,122)	(387,489,122)
VA Specific Direct	($85,485,406)	($85,485,406)	(85,485,406)
Indirect	($2,150,603,270)	($2,150,603,270)	(2,150,603,270)
VA Specific Indirect	($248,152,733)	($248,152,733)	(248,152,733)
Research and Education	($923,738)	($923,738)	(923,738)
VA Overhead	($392,147,981)	($392,147,981)	(392,147,981)
VA Care Operational Cost Total (PV)	($7,660,232,568)	($7,660,232,568)	(7,660,232,568)
CC Direct	($1,248,660,955)	($1,248,660,955)	(1,248,660,955)
Delivery and Operations	($59,094,213)	($59,094,213)	(59,094,213)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($60,963,662)	($60,963,662)	(60,963,662)
CC Overhead	($76,008,372)	($76,008,372)	(76,008,372)
Admin PMPM	($645,820,577)	($645,820,577)	(645,820,577)
Non-VA Care Operational Cost Total (PV)	($2,090,547,780)	($2,090,547,780)	(2,090,547,780)
Estimated Operational Costs (PV)	($9,750,780,348)	($9,750,780,348)	(9,750,780,348)

Appendix B – VISN 05 Martinsburg: 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	121	145	133	Adequately Supplied
IP Med/Surg	31	38	48	Over Supplied
IP MH	19	23	19	Under 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	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 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	77.8%	77.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.4%	78.4%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.2%	84.2%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.6%	98.6%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.8%	99.8%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.6%	99.6%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	77.8%	77.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.4%	78.4%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.2%	84.2%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.6%	98.6%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.8%	99.8%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.6%	99.6%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	77.8%	79.0%	Increased 1% or more

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.4%	79.0%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.2%	87.6%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.6%	98.8%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.8%	99.8%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.6%	99.6%	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?
(V05) (613) Martinsburg	1983	No

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
(V05) (613) Martinsburg	IP Med	20 ADC	No	Maintain
(V05) (613) Martinsburg	IP Surg	1,600 Cases	Yes	Maintain
(V05) (613) Martinsburg	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?
(V05) (613) Martinsburg	1983	N/A	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?
N/A	N/A

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
(V05) (613) Martinsburg	No impact on training	No Research Program	No PRC Designation	Does Not Increase Training/Research Opportunities

VISN 05 Washington

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 05 Washington Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (1.57) is 30.1% lower than the Status Quo COA (2.25) and 13.7% lower than the Modernization COA (1.82).

The VA Recommendation COA is $4.0 B (22.3%) more expensive than the Status Quo COA and $2.0 B (9.8%) 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 14-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 53 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($18,004,231,937)	($20,041,016,769)	($22,011,958,945)
Benefit Analysis Score	8	11	14
CBI (Normalized in $Billions)	2.25	1.82	1.57
CBI % Change vs. Status Quo	N/A	-19.0%	-30.1%
CBI % Change vs. Modernization	N/A	N/A	-13.7%

Table 54 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance	N/A	($2,036,784,833)	($4,007,727,008)
Operational Cost Variance	N/A	$0	$0
Estimated Total Cost Variance vs. Status Quo	N/A	($2,036,784,833)	($4,007,727,008)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($1,970,942,176)

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 55 – 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	2
Mission	2	2	3
Total Benefit Score	**8**	**11**	**14**

VA Recommendation

The VA Recommendation for the VISN 05 Washington Market COA is detailed below.

- Modernize and realign the Washington VAMC by:
  - Constructing a replacement VAMC with inpatient medical and surgical services, inpatient mental health services, outpatient surgery, emergency department services, and outpatient services in the vicinity of Washington, DC
  - Relocating the CLC to a stand-alone site in the vicinity of Washington, DC
  - Closing the current Washington VAMC
- Modernize by establishing a new stand-alone RRTP in the vicinity of Washington, DC
- Strengthen the partnership with DoD’s Walter Reed National Military Medical Center
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Dale City, Virginia
  - Establishing a new MS CBOC in the vicinity of Leesburg, Virginia
  - Establishing a new MS CBOC in the vicinity of Bethesda, Maryland
  - Establishing a new CBOC in the vicinity of Fairfax, Virginia
  - Relocating the Southern Prince George’s County-Andrews Air Force Base CBOC to a new site in the vicinity of Prince George’s County, Maryland, and closing the existing Southern Prince George's County-Andrews Air Force Base CBOC
  - Relocating all services at the Southeast Washington CBOC and closing the Southeast Washington CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Washington Market across a 30-year horizon. The cost of the VA Recommendation COA ($22.0 B) was higher than the Status Quo COA ($18.0 B) and the Modernization COA ($20.0 B).

For the VISN 05 Washington Market, the VA Recommendation COA is $4.0 B (22.3%) more expensive than the Status Quo COA and $2.0 B (9.8%) 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 05 Washington: Capital and Operational Costs Detail.

Table 56 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($18,004,231,937)	($20,041,016,769)	($22,011,958,945)
Capital Cost Variance vs. Status Quo	N/A	($2,036,784,833)	($4,007,727,008)
Operational Cost Variance vs. Status Quo	N/A	$0	$0
Non-VA Care Operational Cost Variance	N/A	$0	$0
VA Care Operational Cost Variance	N/A	$0	$0
Estimated Total Cost Variance vs. Status Quo	N/A	($2,036,784,833)	($4,007,727,008)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($1,970,942,176)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Washington 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	3
Quality	2	3	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	1	2	2
Mission	2	2	3
Total Benefit Score	**8**	**11**	**14**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 05 Washington: 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 05 Washington 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, expansion of 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 Washington CLC to provide inpatient community living center services; 140,432 enrollees live within 60 minutes of the proposed facility
- Establishes a new Washington RRTP to provide inpatient residential rehabilitative services; 140,432 enrollees live within 60 minutes of the proposed facility
- Establishes a new Walter Reed MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 5,230 enrollees for which the proposed facility is the closest VA point of care within 60 minutes

- Establishes a new Fairfax CBOC to provide primary care and outpatient mental health services; there are 15,194 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Loudon County MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 6,115 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new Prince William County MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 16,263 enrollees for which the proposed facility is the closest VA point of care within 60 minutes

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 05 Washington for this domain.

Table 59 – 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 increased 1% or more, 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 05 Washington for this domain.

Table 60 – 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 05 Washington for this domain.

Table 61 – Facilities and Sustainability Scoring Summary

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

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 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).

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 05 Washington for this domain.

Table 62 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	3

Subdomain	Status Quo	Modernization	VA Recommendation
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 05 Washington Market, three scenarios changed the outcome of the CBA:

- Increasing the Modernization benefits score by two points
- Increasing the Modernization benefits score by three points
- Increasing the VA Capital Cost by 300%; Status Quo becomes the preferred COA

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	2.25	1.82	1.57	VA Recommendation
+1	2.00	1.67	1.57	VA Recommendation
+2	1.80	1.54	1.57	Modernization
+3	1.64	1.43	1.57	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%	2.25	1.82	1.57	VA Recommendation
50%	2.31	1.96	1.75	VA Recommendation
100%	2.36	2.09	1.92	VA Recommendation
150%	2.42	2.22	2.10	VA Recommendation
200%	2.48	2.36	2.27	VA Recommendation
250%	2.53	2.49	2.45	VA Recommendation
300%	2.59	2.63	2.63	Status Quo

Table 66 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	2.25	1.82	1.57	VA Recommendation
50%	3.10	2.44	2.06	VA Recommendation
100%	3.95	3.06	2.54	VA Recommendation
150%	4.80	3.68	3.03	VA Recommendation
200%	5.65	4.30	3.52	VA Recommendation
250%	6.51	4.92	4.00	VA Recommendation
300%	7.36	5.54	4.49	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%	2.25	1.82	1.57	VA Recommendation
50%	2.47	1.98	1.70	VA Recommendation
100%	2.69	2.14	1.82	VA Recommendation
150%	2.90	2.30	1.94	VA Recommendation
200%	3.12	2.45	2.07	VA Recommendation
250%	3.34	2.61	2.19	VA Recommendation
300%	3.55	2.77	2.32	VA Recommendation

Appendix A – VISN 05 Washington: Capital and Operational Costs Detail

Table 68 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	1,978,437	3,012,795
Build New GSF	-	1,282,533	2,231,700
Renovate In Place GSF	-	82,519	-
Matched Convert To GSF	-	164,498	-
Demolition GSF	-	794,792	1,041,809
Total Build New Cost	$0	($1,240,781,165)	($2,045,130,197)
Total Renovate In Place Cost	$0	($25,140,527)	$0
Total Matched Convert To Cost	$0	($68,161,563)	$0
Total Demolition Cost	$0	($29,939,165)	($19,794,371)
Total Lease Build-Out Cost	$0	($28,710,219)	($81,068,296)
Total New Lease Cost	$0	($210,185,406)	($593,432,877)
Total Existing Lease Cost	($54,406,976)	($54,406,914)	($53,018,711)
NRM Costs for Owned Facilities	($697,324,803)	($230,967,850)	($351,721,557)
FCA Correction Cost	($141,528,685)	N/A	N/A
Estimated Base Modernization Cost	($893,260,464)	($1,888,292,808)	($3,144,166,010)
Additional Common/Lobby Space Needed (GSF)	-	448,887	781,095
Cost of Additional Common/Lobby Space	$0	($372,752,749)	($648,616,691)
Additional Parking Cost	$0	($302,409,470)	($712,090,862)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($31,818)	($609,834)
Seismic Correction Cost	($1,627,705)	($294,349)	$0
Non-Building FCA Correction Cost	($14,137,425)	($14,137,424)	$0
Activation Costs	$0	($367,891,808)	($411,269,205)
Estimated Additional Costs for Modernization	($15,765,129)	($1,057,517,618)	($1,772,586,592)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($909,025,594)	($2,945,810,426)	($4,916,752,602)

Table 69 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($7,182,607,090)	($7,182,607,090)	($7,182,607,090)
Fixed Direct	($818,629,859)	($818,629,859)	($818,629,859)
VA Specific Direct	($528,260,291)	($528,260,291)	($528,260,291)
Indirect	($4,069,314,287)	($4,069,314,287)	($4,069,314,287)
VA Specific Indirect	($316,690,883)	($316,690,883)	($316,690,883)
Research and Education	($8,941,067)	($8,941,067)	($8,941,067)
VA Overhead	($692,829,206)	($692,829,206)	($692,829,206)
VA Care Operational Cost Total (PV)	($13,617,272,684)	($13,617,272,684)	($13,617,272,684)
CC Direct	($2,322,859,081)	($2,322,859,081)	($2,322,859,081)
Delivery and Operations	($97,937,606)	($97,937,606)	($97,937,606)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($86,250,087)	($86,250,087)	($86,250,087)
CC Overhead	($129,318,036)	($129,318,036)	($129,318,036)
Admin PMPM	($841,568,850)	($841,568,850)	($841,568,850)
Non-VA Care Operational Cost Total (PV)	($3,477,933,659)	($3,477,933,659)	($3,477,933,659)
Estimated Operational Costs (PV)	($17,095,206,343)	($17,095,206,343)	($17,095,206,343)

Appendix B – VISN 05 Washington: 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	152	183	80	Under Supplied
IP Med/Surg	84	101	137	Over Supplied
IP MH	27	33	27	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	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 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	78.3%	78.3%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.3%	78.3%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.9%	99.9%	Maintained within 1%

COA	Measure	Current	Future	Result
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	99.8%	99.8%	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	78.3%	78.3%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.3%	78.3%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.9%	99.9%	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	99.8%	99.8%	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	78.3%	98.3%	Increased 1% or more

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	78.3%	98.3%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	99.9%	100.0%	Maintained within 1%
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	99.8%	99.8%	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?
(V05) (688) Washington-DC	1965	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
(V05) (688) Washington-DC	IP Med	20 ADC	Yes	Replace/Relocate
(V05) (688) Washington-DC	IP Surg	1,600 Cases	Yes	Replace/Relocate
(V05) (688) Washington-DC	IP MH	8 ADC	Yes	Replace/Relocate

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?
(V05) (688) Washington-DC	1965	N/A	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?
N/A	N/A

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
(V05) (688) Washington-DC	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 05 Huntington

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)m*
>
> *"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 05 Huntington Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (0.55) is 33.5% lower than the Status Quo COA (0.83) and 30.0% lower than the Modernization COA (0.79).

The VA Recommendation COA is $299.0 M (4.0%) less expensive than the Status Quo COA and $714.1 M (9.0%) less expensive than the Modernization COA. While the VA Recommendation COA decreases cost compared to the Status Quo and Modernization COAs, it also increases benefits as seen by a 13-point benefits score compared to 9 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 ($)	($7,508,549,141)	($7,923,652,079)	($7,209,543,561)
Benefit Analysis Score	9	10	13
CBI (Normalized in $Billions)	0.83	0.79	0.55
CBI % Change vs. Status Quo	N/A	-5.0%	-33.5%
CBI % Change vs. Modernization	N/A	N/A	-30.0%

Table 80 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($415,102,939)	($581,073,983)
Operational Cost Variance vs. Status Quo	N/A	$0	$880,079,562
Estimated Total Cost Variance vs. Status Quo	N/A	($415,102,939)	$299,005,580
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$714,108,518

Note: When the VA Recommendation COA shifts care across markets costs are still incurred by the originating market in the future state. This is done to better compare COAs in each market and because the costs remain with the VHA at the national level.

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	2	2	3
Facilities and Sustainability	2	2	3
Mission	2	2	3
Total Benefit Score	**9**	**10**	**13**

VA Recommendation

The VA Recommendation for the VISN 05 Huntington Market COA is detailed below.

- Modernize and realign the Huntington VAMC by:
    - Establishing a strategic collaboration to provide inpatient medical and surgical services and discontinuing those services at the Huntington VAMC. If unable to enter into a strategic collaboration for inpatient medical and surgical services, utilize community providers
    - Converting the emergency department at the Huntington VAMC to an urgent care center and discontinuing those services at the Huntington VAMC
    - Establishing a new CLC at the Huntington VAMC
- Modernize by establishing a new stand-alone RRTP in the vicinity of Charleston, West Virginia
- Modernize and realign outpatient facilities in the market by:
    - Relocating the Lenore-Williamson OOS to a new site in the vicinity of Chattaroy, West Virginia, and closing the current Lenore-Williamson OOS
    - Relocating the Charleston MS CBOC to a new site in the vicinity of Charleston, West Virginia, and closing the current Charleston MS CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Huntington Market across a 30-year horizon. The cost of the VA Recommendation COA ($7.2 B) was lower than the Status Quo COA ($7.5 B) and the Modernization COA ($7.9 B).

For the VISN 05 Huntington Market, the VA Recommendation COA is $299.0 M (4.0%) less expensive than the Status Quo COA and $714.1 M (9.0%) 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 05 Huntington: Capital and Operational Costs Detail.

Table 82 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($7,508,549,141)	($7,923,652,079)	($7,209,543,561)
Capital Cost Variance vs. Status Quo	N/A	($415,102,939)	($581,073,983)
Operational Cost Variance vs. Status Quo	N/A	$0	$880,079,562
Non-VA Care Operational Cost Variance	N/A	$0	($440,049,937)
VA Care Operational Cost Variance	N/A	$0	$1,320,129,499
Estimated Total Cost Variance vs. Status Quo	N/A	($415,102,939)	$299,005,580
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$714,108,518

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Huntington 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
Access	2	2	1
Quality	2	2	3
Facilities and Sustainability	2	2	3
Mission	2	2	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Total Benefit Score	**9**	**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 05 Huntington: 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 05 Huntington 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 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 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 Charleston RRTP to provide inpatient residential rehabilitative services; 16,368 enrollees live within 60 minutes of the proposed facility
- Expands the Gallipolis OOS to a CBOC, adding primary care services
- Establishes the new Huntington inpatient medicine and 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 05 Huntington 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 decreased 1% or more, specialty care was maintained within 1%, 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 05 Huntington for this domain.

Table 86 – Quality Scoring Summary

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

Status Quo: The COA received a score of 2 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 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 Huntington's low census inpatient medicine and surgery program to the inpatient partnership to deliver care by credentialing VA providers or creating a Hospital within a Hospital within a community provider space in the Kenova, WV area

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 05 Huntington for this domain.

Table 87 – Facilities and Sustainability Scoring Summary

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Facilities and Sustainability	2	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 2 for two reasons. First, the COA's main patient care facilities are still within their useful life, indicating they can be sustained over the coming years. Second, while the COA includes modern 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).

Modernization: The COA received a score of 2 for two reasons. First, the COA's main patient care facilities are still within their useful life, indicating they can be sustained over the coming years. Second, while the COA includes modern 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 Huntington inpatient medicine and 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 05 Huntington for this domain.

Table 88 – 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 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 05 Huntington 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 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	0.83	0.79	0.55	VA Recommendation

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+1	0.75	0.72	0.55	VA Recommendation
+2	0.68	0.66	0.55	VA Recommendation
+3	0.63	0.61	0.55	VA Recommendation

Table 91 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.83	0.79	0.55	VA Recommendation
50%	0.85	0.83	0.59	VA Recommendation
100%	0.86	0.86	0.62	VA Recommendation
150%	0.88	0.89	0.65	VA Recommendation
200%	0.89	0.92	0.68	VA Recommendation
250%	0.90	0.96	0.71	VA Recommendation
300%	0.92	0.99	0.75	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%	0.83	0.79	0.55	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
50%	1.06	1.00	0.66	VA Recommendation
100%	1.29	1.20	0.77	VA Recommendation
150%	1.52	1.41	0.88	VA Recommendation
200%	1.75	1.61	0.98	VA Recommendation
250%	1.97	1.82	1.09	VA Recommendation
300%	2.20	2.02	1.20	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%	0.83	0.79	0.55	VA Recommendation
50%	1.01	0.95	0.69	VA Recommendation
100%	1.19	1.11	0.83	VA Recommendation
150%	1.36	1.27	0.97	VA Recommendation
200%	1.54	1.42	1.11	VA Recommendation
250%	1.71	1.58	1.25	VA Recommendation
300%	1.89	1.74	1.39	VA Recommendation

Appendix A – VISN 05 Huntington: Capital and Operational Costs Detail

Table 94 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	636,144	754,777
Build New GSF	-	178,347	262,378
Renovate In Place GSF	-	207,886	210,035
Matched Convert To GSF	-	187,490	190,532
Demolition GSF	-	241,723	241,723
Total Build New Cost	$0	($184,529,269)	($261,710,442)
Total Renovate In Place Cost	$0	($81,532,897)	($77,572,167)
Total Matched Convert To Cost	$0	($75,475,074)	($76,196,507)
Total Demolition Cost	$0	($9,011,639)	($9,011,639)
Total Lease Build-Out Cost	$0	($18,006,072)	($28,059,407)
Total New Lease Cost	$0	($54,443,734)	($84,841,368)
Total Existing Lease Cost	($20,824,997)	($20,824,921)	($11,534,602)
NRM Costs for Owned Facilities	($172,233,634)	($74,265,164)	($88,114,673)
FCA Correction Cost	($39,803,404)	N/A	N/A
Estimated Base Modernization Cost	($232,862,035)	($518,088,771)	($637,040,806)
Additional Common/Lobby Space Needed (GSF)	-	62,421	91,832
Cost of Additional Common/Lobby Space	$0	($51,300,029)	($75,470,847)
Additional Parking Cost	$0	$0	($7,095,978)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	$0	($1,544,773)
Seismic Correction Cost	($6,951,598)	($5,709,576)	($5,709,577)
Non-Building FCA Correction Cost	($8,185,785)	($8,185,785)	($8,185,785)
Activation Costs	$0	($79,818,197)	($94,025,635)
Estimated Additional Costs for Modernization	($15,137,384)	($145,013,587)	($192,032,595)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($247,999,419)	($663,102,357)	($829,073,401)

Table 95 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($2,032,908,959)	($2,032,908,959)	($1,398,231,594)
Fixed Direct	($333,250,736)	($333,250,736)	($222,063,157)
VA Specific Direct	($76,225,368)	($76,225,368)	($42,248,486)
Indirect	($1,211,363,746)	($1,211,363,746)	($812,801,676)
VA Specific Indirect	($226,301,985)	($226,301,985)	($154,975,180)
Research and Education	($34,099)	($34,099)	($34,099)
VA Overhead	($219,580,494)	($219,580,494)	($149,181,695)
VA Care Operational Cost Total (PV)	($4,099,665,387)	($4,099,665,387)	($2,779,535,888)
CC Direct	($2,330,534,325)	($2,330,534,325)	($2,791,939,788)

	Status Quo	Modernization	VA Recommendation
Delivery and Operations	($103,690,492)	($103,690,492)	($117,062,393)
Care Coordination	($108,212,256)	($108,212,256)	($121,523,018)
CC Overhead	($136,078,785)	($136,078,785)	($153,895,580)
Admin PMPM	($482,368,476)	($482,368,476)	($416,513,492)
Non-VA Care Operational Cost Total (PV)	($3,160,884,335)	($3,160,884,335)	($3,600,934,271)
Estimated Operational Costs (PV)	($7,260,549,722)	($7,260,549,722)	($6,380,470,160)

Appendix B – VISN 05 Huntington: 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 19 – 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	5	6	0	Under Supplied
IP Med/Surg	24	29	60	Over Supplied
IP MH	4	4	0	Under Supplied

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

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 20 – 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 21 – 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 96 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	57.9%	57.9%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	71.1%	71.1%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	80.8%	80.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	96.9%	96.9%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.0%	99.0%	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	57.9%	57.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	71.1%	71.1%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	80.8%	80.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	96.9%	96.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.0%	99.0%	Maintained within 1%

COA	Measure	Current	Future	Result
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	57.9%	66.2%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	71.1%	69.0%	Decreased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	80.8%	81.2%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	96.9%	97.6%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.0%	99.2%	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 23 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V05) (581) Huntington-West Virginia	1993	No

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

Inpatient Acute Demand

Table 24 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V05) (581) Huntington	IP Med	20 ADC	No	Partner (VA Delivered)
(V05) (581) Huntington	IP Surg	1,600 Cases	Yes	Partner (VA Delivered)
(V05) (581) Huntington	IP MH	8 ADC	No Service	N/A

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 25 – 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?
(V05) (581) Huntington-West Virginia	1993	N/A	No

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 26 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V05) Huntington IP Partnership	Yes

Mission

Table 27 – 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
(V05) (581) Huntington	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities

VISN 05 Beckley

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 05 Beckley Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (0.24) is 49.6% lower than the Status Quo COA (0.48) and 30.1% lower than the Modernization COA (0.35).

The VA Recommendation COA is $28.6 M (0.8%) more expensive than the Status Quo COA and $72.6 M (2.1%) less expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo COA and decreases costs compared to the Modernization COA, it also increases benefits as seen by a 14-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 97 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($3,389,986,899)	($3,491,194,559)	($3,418,607,676)
Benefit Analysis Score	7	10	14
CBI (Normalized in $Billions)	0.48	0.35	0.24
CBI % Change vs. Status Quo	N/A	-27.9%	-49.6%
CBI % Change vs. Modernization	N/A	N/A	-30.1%

Table 98 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($101,207,660)	($336,021,564)
Operational Cost Variance vs. Status Quo	N/A	$0	$307,400,787
Estimated Total Cost Variance vs. Status Quo	N/A	($101,207,660)	($28,620,777)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$72,586,883

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 the VA care to Non-VA care.

Table 99 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	3
Quality	1	2	3
Facilities and Sustainability	1	2	3
Mission	2	2	2
Total Benefit Score	**7**	**10**	**14**

VA Recommendation

The VA Recommendation for the VISN 05 Beckley Market COA is detailed below.

- Modernize and realign the Beckley VAMC by:
  - Constructing a new replacement VAMC with CLC, Adult Day Care, and non-surgical outpatient services in the vicinity of Beckley, West Virginia
  - Establishing a strategic collaboration to provide inpatient medical and surgical services and outpatient surgical services and discontinuing those services at the Beckley VAMC. If unable to enter into a strategic collaboration for inpatient medical and surgical services and outpatient surgical services, utilize community providers
  - Relocating emergency department services to community providers and discontinuing those services at the Beckley VAMC
  - Closing the existing Beckley VAMC
- Modernize and realign outpatient facilities in the market by establishing a new OOS site in the vicinity of Summersville, West Virginia

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Beckley Market across a 30-year horizon. The cost of the VA Recommendation COA ($3.42 B) was higher than the Status Quo COA ($3.39 B) and lower than the Modernization COA ($3.49 B).

For the VISN 05 Beckley Market, the VA Recommendation COA is $28.6 M (0.8%) more expensive than the Status Quo COA and $72.6 M (2.1%) 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 05 Beckley: Capital and Operational Costs Detail.

Table 100 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($3,389,986,899)	($3,491,194,559)	($3,418,607,676)
Capital Cost Variance vs. Status Quo	N/A	($101,207,660)	($336,021,564)
Operational Cost Variance vs. Status Quo	N/A	$0	$307,400,787
Non-VA Care Operational Cost Variance	N/A	$0	($211,744,039)
VA Care Operational Cost Variance	N/A	$0	$519,144,826
Estimated Total Cost Variance vs. Status Quo	N/A	($101,207,660)	($28,620,777)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$72,586,883

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Beckley 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 101 – Benefit Analysis Scores by COA

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

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Total Benefit Score	**7**	**10**	**14**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 05 Beckley: 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 05 Beckley for this domain.

Table 102 – 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 the new Beckley inpatient medicine and surgery, outpatient surgery, and outpatient specialty care 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 05 Beckley for this domain.

Table 103 – 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 increased 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 05 Beckley for this domain.

Table 104 – 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 action to ensure adequate demand across inpatient acute service lines throughout the market:

- Transition Beckley's low census inpatient medicine and surgery program to the inpatient partnership to deliver care in a community provided space with market providers in the Beckley area

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 05 Beckley for this domain.

Table 105 – 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 Beckley inpatient medicine and surgery, outpatient surgery, and outpatient specialty care 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 05 Beckley for this domain.

Table 106 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	2
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 2 because inpatient acute services remain VA-delivered and thus the COA maintains 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 107 – 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 05 Beckley 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 108 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	0.48	0.35	0.24	VA Recommendation
+1	0.42	0.32	0.24	VA Recommendation
+2	0.38	0.29	0.24	VA Recommendation
+3	0.34	0.27	0.24	VA Recommendation

Table 109 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.48	0.35	0.24	VA Recommendation
50%	0.51	0.37	0.27	VA Recommendation
100%	0.53	0.39	0.29	VA Recommendation
150%	0.56	0.42	0.32	VA Recommendation
200%	0.58	0.44	0.34	VA Recommendation
250%	0.61	0.46	0.36	VA Recommendation
300%	0.63	0.48	0.39	VA Recommendation

Table 110 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.48	0.35	0.24	VA Recommendation
50%	0.63	0.45	0.30	VA Recommendation
100%	0.77	0.55	0.35	VA Recommendation
150%	0.91	0.65	0.40	VA Recommendation
200%	1.05	0.75	0.45	VA Recommendation
250%	1.19	0.85	0.51	VA Recommendation
300%	1.34	0.95	0.56	VA Recommendation

Table 111 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.48	0.35	0.24	VA Recommendation
50%	0.56	0.40	0.29	VA Recommendation
100%	0.64	0.46	0.34	VA Recommendation
150%	0.71	0.51	0.38	VA Recommendation
200%	0.79	0.56	0.43	VA Recommendation
250%	0.86	0.61	0.47	VA Recommendation
300%	0.94	0.67	0.52	VA Recommendation

Appendix A – VISN 05 Beckley: Capital and Operational Costs Detail

Table 112 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	352,747	546,044
Build New GSF	-	228,532	404,477
Renovate In Place GSF	-	10,595	0
Matched Convert To GSF	-	33,634	0
Demolition GSF	-	299,798	344027
Total Build New Cost	$0	($211,871,457)	($354,943,308)
Total Renovate In Place Cost	$0	($319,805)	$0
Total Matched Convert To Cost	$0	($13,361,913)	$0
Total Demolition Cost	$0	($10,827,451)	($6,536,513)
Total Lease Build-Out Cost	$0	($4,433,629)	($8,842,074)
Total New Lease Cost	$0	($13,084,745)	($26,105,493)
Total Existing Lease Cost	($2,044,453)	($2,044,443)	($2,044,453)
NRM Costs for Owned Facilities	($256,513,041)	($41,180,629)	($63,746,597)
FCA Correction Cost	($69,309,608)	N/A	N/A
Estimated Base Modernization Cost	($327,867,103)	($297,124,073)	($462,218,438)
Additional Common/Lobby Space Needed (GSF)	-	79,986	141,567
Cost of Additional Common/Lobby Space	$0	($63,681,097)	($112,708,677)
Additional Parking Cost	$0	($7,121,475)	($20,304,622)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	$0	($5,391,909)
Seismic Correction Cost	($2,717,221)	($17,195)	$0
Non-Building FCA Correction Cost	($8,833,822)	($8,833,821)	$0
Activation Costs	$0	($63,848,145)	($74,816,064)
Estimated Additional Costs for Modernization	($11,551,043)	($143,501,733)	($213,221,272)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($339,418,146)	($440,625,806)	($675,439,710)

Table 113 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($928,589,586)	($928,589,586)	($673,787,504)
Fixed Direct	($220,137,981)	($220,137,981)	($165,881,842)
VA Specific Direct	($20,375,251)	($20,375,251)	($18,948,265)
Indirect	($601,363,569)	($601,363,569)	($454,391,006)
VA Specific Indirect	($101,868,836)	($101,868,836)	($72,108,578)
Research and Education	($1,810,673)	($1,810,673)	($150,180)
VA Overhead	($115,723,432)	($115,723,432)	($85,457,128)
VA Care Operational Cost Total (PV)	($1,989,869,328)	($1,989,869,328)	($1,470,724,502)
CC Direct	($713,934,223)	($713,934,223)	($924,096,361)
Delivery and Operations	($29,543,686)	($29,543,686)	($38,009,315)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($30,039,181)	($30,039,181)	($39,465,029)
CC Overhead	($38,297,186)	($38,297,186)	($49,599,866)
Admin PMPM	($248,885,148)	($248,885,148)	($221,272,893)
Non-VA Care Operational Cost Total (PV)	($1,060,699,425)	($1,060,699,425)	($1,272,443,464)
Estimated Operational Costs (PV)	($3,050,568,753)	($3,050,568,753)	($2,743,167,966)

Appendix B – VISN 05 Beckley: 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 114 – 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	27	32	50	Over Supplied
IP Med/Surg	11	14	30	Over Supplied
IP MH	2	3	0	Under Supplied

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

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 115 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	8	30%
Under Supplied	19	70%

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 116 – 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 117 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	64.2%	64.2%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	64.2%	64.2%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	82.8%	82.8%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	87.6%	87.6%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	97.4%	97.4%	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	64.2%	64.2%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	64.2%	64.2%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	82.8%	82.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	87.6%	87.6%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	97.4%	97.4%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	99.9%	99.9%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	64.2%	64.2%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	64.2%	72.6%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	82.8%	87.2%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	87.6%	87.6%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	97.4%	97.7%	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 118 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V05) (517) Beckley-West Virginia	1950	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 119 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V05) (517) Beckley	IP Med	20 ADC	No	Partner (VA Delivered)
(V05) (517) Beckley	IP Surg	1,600 Cases	No	Partner (VA Delivered)
(V05) (517) Beckley	IP MH	8 ADC	No Service	N/A

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 120 – 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?
(V05) (517) Beckley-West Virginia	1950	2002	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 121 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V05) Beckley IP/OP Partnership	Yes

Mission

Table 122 – 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
(V05) (517) Beckley	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities

VISN 05 Clarksburg

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 05 Clarksburg Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (0.35) is 47.9% lower than the Status Quo COA (0.68) and 33.3% lower than the Modernization COA (0.53).

The VA Recommendation COA is $203.1 M (4.3%) more expensive than the Status Quo COA and $348.9 M (6.6%) less expensive than the Modernization COA. While the VA Recommendation COA increases cost compared to the Status Quo COA and decreases costs compared to the Modernization COA, it also increases benefits as seen by a 14-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 123 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($4,762,154,060)	($5,314,147,130)	($4,965,243,368)
Benefit Analysis Score	7	10	14
CBI (Normalized in $Billions)	0.68	0.53	0.35
CBI % Change vs. Status Quo	N/A	-21.9%	-47.9%
CBI % Change vs. Modernization	N/A	N/A	-33.3%

Table 124 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($551,993,070)	($600,492,276)
Operational Cost Variance vs. Status Quo	N/A	$0	$397,402,967
Estimated Total Cost Variance vs. Status Quo	N/A	($551,993,070)	($203,089,308)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$348,903,761

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 125 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	3
Quality	1	2	2
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**7**	**10**	**14**

VA Recommendation

The VA Recommendation for the VISN 05 Clarksburg Market COA is detailed below.

- Modernize and realign the Clarksburg VAMC by:
  - Establishing a strategic collaboration to provide inpatient medical and surgical services and discontinuing those services at the Clarksburg VAMC. If unable to enter into a strategic collaboration for inpatient medical and surgical services, utilize community providers
  - Converting the emergency department at the Clarksburg VAMC to an urgent care center and discontinuing those services at the Clarksburg VAMC
  - Modernizing the CLC at the Clarksburg VAMC
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Buckhannon, West Virginia
  - Relocating the Westover CBOC to a new site in the vicinity of Westover, West Virginia, and closing the existing Westover CBOC
  - Relocating all services provided at the Parsons OOS and closing the Parsons OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 05 Clarksburg Market across a 30-year horizon. The cost of the VA Recommendation COA ($5.0 B) was higher than the Status Quo COA ($4.8 B) and lower than the Modernization COA ($5.3 B).

For the VISN 05 Clarksburg Market, the VA Recommendation COA is $203.1 M (4.3%) more expensive than the Status Quo COA and $348.9 M (6.6%) 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 05 Clarksburg: Capital and Operational Costs Detail.

Table 126 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($4,762,154,060)	($5,314,147,130)	($4,965,243,368)
Capital Cost Variance vs. Status Quo	N/A	($551,993,070)	($600,492,276)
Operational Cost Variance vs. Status Quo	N/A	$0	$397,402,967
Non-VA Care Operational Cost Variance	N/A	$0	($373,865,880)
VA Care Operational Cost Variance	N/A	$0	$771,268,847
Estimated Total Cost Variance vs. Status Quo	N/A	($551,993,070)	($203,089,308)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$348,903,761

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 05 Clarksburg 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 127 – Benefit Analysis Scores by COA

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

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Total Benefit Score	**7**	**10**	**14**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 05 Clarksburg: 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 05 Clarksburg for this domain.

Table 128 – 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 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 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:

- Expands the Parkersburg CBOC to a MS CBOC, adding specialty care services
- Establishes the new Clarksburg inpatient medicine and 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 05 Clarksburg for this domain.

Table 129 – 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 increased 1% or more, 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 05 Clarksburg for this domain.

Table 130 – 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 05 Clarksburg for this domain.

Table 131 – 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, 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). The COA includes the following action to support VA's ability to recruit or retain providers:

- Establishes the Clarksburg inpatient medicine and 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 05 Clarksburg for this domain.

Table 132 – 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 133 – 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 05 Clarksburg 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 134 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	0.68	0.53	0.35	VA Recommendation

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+1	0.60	0.48	0.35	VA Recommendation
+2	0.53	0.44	0.35	VA Recommendation
+3	0.48	0.41	0.35	VA Recommendation

Table 135 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.68	0.53	0.35	VA Recommendation
50%	0.69	0.57	0.38	VA Recommendation
100%	0.70	0.60	0.41	VA Recommendation
150%	0.71	0.64	0.44	VA Recommendation
200%	0.72	0.67	0.46	VA Recommendation
250%	0.74	0.71	0.49	VA Recommendation
300%	0.75	0.74	0.52	VA Recommendation

Table 136 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.68	0.53	0.35	VA Recommendation
50%	0.92	0.70	0.45	VA Recommendation
100%	1.17	0.87	0.54	VA Recommendation
150%	1.41	1.04	0.64	VA Recommendation
200%	1.65	1.21	0.73	VA Recommendation
250%	1.89	1.38	0.82	VA Recommendation
300%	2.14	1.55	0.92	VA Recommendation

Table 137 – Sensitivity Analyses – Non-VA Operational Cost Increase

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	0.68	0.53	0.35	VA Recommendation
50%	0.77	0.59	0.41	VA Recommendation
100%	0.85	0.65	0.47	VA Recommendation
150%	0.94	0.71	0.52	VA Recommendation
200%	1.03	0.77	0.58	VA Recommendation
250%	1.11	0.83	0.64	VA Recommendation
300%	1.20	0.89	0.69	VA Recommendation

Appendix A – VISN 05 Clarksburg: Capital and Operational Costs Detail

Table 138 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	616,785	643,634
Build New GSF	-	302,325	322,213
Renovate In Place GSF	-	127,860	125,246
Matched Convert To GSF	-	80,786	83,400
Demolition GSF	-	248,882	248,882
Total Build New Cost	$0	($295,865,977)	($314,600,176)
Total Renovate In Place Cost	$0	($37,076,877)	($36,061,110)
Total Matched Convert To Cost	$0	($33,089,481)	($34,229,194)
Total Demolition Cost	$0	($9,375,180)	($9,375,180)
Total Lease Build-Out Cost	$0	($11,825,923)	($18,505,630)
Total New Lease Cost	$0	($34,514,673)	($54,009,888)
Total Existing Lease Cost	($9,207,533)	($9,207,513)	($4,721,590)
NRM Costs for Owned Facilities	($117,813,369)	($72,005,063)	($75,139,462)
FCA Correction Cost	($22,161,934)	N/A	N/A
Estimated Base Modernization Cost	($149,182,835)	($502,960,687)	($546,642,230)
Additional Common/Lobby Space Needed (GSF)	-	105,814	112,775
Cost of Additional Common/Lobby Space	$0	($87,867,115)	($93,647,323)
Additional Parking Cost	$0	($9,586,891)	($10,774,922)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($2,613,369)	($2,928,139)
Seismic Correction Cost	$0	$0	$0
Non-Building FCA Correction Cost	($4,660,420)	($4,660,419)	($4,660,420)
Activation Costs	$0	($98,147,844)	($95,682,498)
Estimated Additional Costs for Modernization	($4,660,420)	($202,875,638)	($207,693,301)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($153,843,255)	($705,836,325)	($754,335,531)

Table 139 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($1,797,745,754)	($1,797,745,754)	($1,378,871,060)
Fixed Direct	($276,899,274)	($276,899,274)	($227,224,456)
VA Specific Direct	($45,244,548)	($45,244,548)	($39,256,139)
Indirect	($954,690,119)	($954,690,119)	($734,066,388)
VA Specific Indirect	($140,860,300)	($140,860,300)	($105,574,464)
Research and Education	($2,391,858)	($2,391,858)	($1,863,064)
VA Overhead	($182,497,683)	($182,497,683)	($142,205,118)
VA Care Operational Cost Total (PV)	($3,400,329,536)	($3,400,329,536)	($2,629,060,689)
CC Direct	($744,836,289)	($744,836,289)	($1,113,801,725)
Delivery and Operations	($33,704,134)	($33,704,134)	($45,001,859)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($32,732,902)	($32,732,902)	($44,248,315)
CC Overhead	($44,600,763)	($44,600,763)	($59,659,888)
Admin PMPM	($352,107,181)	($352,107,181)	($319,135,361)
Non-VA Care Operational Cost Total (PV)	($1,207,981,269)	($1,207,981,269)	($1,581,847,149)
Estimated Operational Costs (PV)	($4,608,310,805)	($4,608,310,805)	($4,210,907,838)

Appendix B – VISN 05 Clarksburg: 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 140 – 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	19	23	38	Over Supplied
IP Med/Surg	22	27	39	Over Supplied
IP MH	4	5	10	Over Supplied

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

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

Table 141 – Demand and Supply Key Data Points for Scoring – Outpatient (OP)

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	6	22%
Under Supplied	21	78%

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 142 – 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 143 – Access Key Data Points for Scoring

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of VA-provided OP Mental Health	59.2%	59.2%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	61.7%	61.7%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	83.6%	83.6%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	92.9%	92.9%	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	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	59.2%	59.2%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	61.7%	61.7%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	83.6%	83.6%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	92.9%	92.9%	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	99.9%	99.9%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	59.2%	67.6%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	61.7%	67.7%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	83.6%	93.6%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	92.9%	92.9%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	98.7%	98.9%	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 144 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V05) (540) Clarksburg-West Virginia	1946	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 145 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V05) (540) Clarksburg	IP Med	20 ADC	No	Partner (VA Delivered)
(V05) (540) Clarksburg	IP Surg	1,600 Cases	Yes	Partner (VA Delivered)
(V05) (540) Clarksburg	IP MH	8 ADC	No	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 146 – 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?
(V05) (540) Clarksburg-West Virginia	1946	1991	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 147 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V05) Clarksburg IP Partnership	Yes

Mission

Table 148 – 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
(V05) (540) Clarksburg	No impact on training	No Research Program	No PRC Designation	Increases Training Opportunities, Increases Research Opportunities