VA Recommendations to the

ASSET AND INFRASTRUCTURE REVIEW COMMISSION

March 2022

Appendix H

Cost Benefit Analysis – VISN 15

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VISN 15 East

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 15 East Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (2.52) is 41.5% lower than the Status Quo COA (4.31) and 18.2% lower than the Modernization COA (3.08).

The VA Recommendation COA $74.7 M (0.2%) more expensive than the Status Quo COA and $551.7 M (1.8%) 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 12-point benefits score compared to 7 for the Status Quo COA and 10 for the Modernization COA.

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

Table 1 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($30,203,407,081)	($30,829,788,836)	($30,278,062,461)
Benefit Analysis Score	7	10	12
CBI (Normalized in $Billions)	4.31	3.08	2.52
CBI % Change vs. Status Quo	N/A	-28.5%	-41.5%
CBI % Change vs. Modernization	N/A	N/A	-18.2%

Table 2 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($626,381,755)	($784,317,629)
Operational Cost Variance vs. Status Quo	N/A	$0	$709,662,248
Estimated Total Cost Variance vs. Status Quo	N/A	($626,381,755)	($74,655,380)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$551,726,375

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	1	2	2
Facilities and Sustainability	1	2	2
Mission	2	2	2
Total Benefit Score	**7**	**10**	**12**

VA Recommendation

The VA Recommendation for the VISN 15 East Market COA is detailed below.

- Modernize and realign the St. Louis-Jefferson Barracks VAMC by relocating inpatient mental health and acute SCI/D services to current or future VA facilities and discontinuing those services at the St. Louis-Jefferson Barracks VAMC
- Modernize and realign the Poplar Bluff VAMC by:
    - Relocating inpatient medicine services to community providers and discontinuing those services at the Poplar Bluff VAMC
    - Modernizing the CLC
- Realign the Marion VAMC by relocating outpatient surgical services to community providers and discontinuing those services at the Marion VAMC
- Realign the Evansville HCC by relocating outpatient surgical services to community providers and discontinuing those services at the Evansville HCC:
- Modernize and realign outpatient facilities in the market by:
    - Establishing a new CBOC in the vicinity of Maryville, Illinois
    - Relocating the St. Charles County CBOC to a new site in the vicinity of St. Peters, Missouri, and closing the existing St. Charles County CBOC
    - Relocating the Paragould CBOC to a new site in the vicinity of Paragould, Arkansas, and closing the existing Paragould CBOC
    - Relocating the West Plains CBOC to a new site in the vicinity of West Plains, Missouri and closing the existing West Plains CBOC
    - Relocating the Paducah CBOC to a new site in the vicinity of Paducah, Kentucky and closing the existing Paducah CBOC
    - Relocating the Hanson OOS site to a new site in the vicinity of Hanson, Kentucky and closing the existing Hanson OOS
    - Relocating the St. Louis County CBOC to a new site in the vicinity of St. Louis County, Missouri and closing the existing St. Louis County CBOC
    - Relocating the Manchester CBOC to a new site in the vicinity of St. Louis, Missouri and closing the existing Manchester CBOC

- Relocating all services to the proposed Manchester MS CBOC and closing the Olive Street CBOC
- Relocating all services to the proposed Manchester MS CBOC and closing the Washington Avenue CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 15 East Market across a 30-year horizon. The cost of the VA Recommendation COA ($30.3 B) was higher than the Status Quo COA ($30.2 B) and lower than the Modernization COA ($30.8 B).

For the VISN 15 East Market, the VA Recommendation COA is $74.7 M (0.2%) more expensive than the Status Quo COA and $551.7 M (1.8%) 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 15 East: Capital and Operational Costs Detail.

Table 4 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($30,203,407,081)	($30,829,788,836)	($30,278,062,461)
Capital Cost Variance vs. Status Quo	N/A	($626,381,755)	($784,317,629)
Operational Cost Variance vs. Status Quo	N/A	$0	$709,662,248
Non-VA Care Operational Cost Variance	N/A	$0	($427,209,426)
VA Care Operational Cost Variance	N/A	$0	$1,136,871,675
Estimated Total Cost Variance vs. Status Quo	N/A	($626,381,755)	($74,655,380)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$551,726,375

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 15 East Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 5 – Benefit Analysis Scores by COA

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

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 15 East: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

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

The table below shows the scores for VISN 15 East for this domain.

Table 6 – Demand and Supply Scoring Summary

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

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

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

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

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

- Establishes a new Madison County CBOC to provide primary care and outpatient mental health services; there are 5,702 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new St. Charles County MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 11,834 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Expands the St. Louis County CBOC to a MS CBOC, adding specialty care services
- Expands the Farmington CBOC to a MS CBOC, adding specialty care services
- Expands the Paducah CBOC to a MS CBOC, adding specialty care services
- Expands the Hanson OOS to a CBOC, adding primary care services
- Expands the Manchester 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 15 East for this domain.

Table 7 – Access Scoring Summary

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

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

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

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

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

Quality

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

The table below shows the scores for VISN 15 East for this domain.

Table 8 – 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 15 East 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 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 15 East for this domain.

Table 10 – Mission Scoring Summary

Subdomain	Status Quo	Modernization	VA Recommendation
Education	2	2	1

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

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

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

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

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

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

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

Sensitivity Analysis

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

The table below outlines the sensitivity analysis scenarios completed.

Table 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 15 East 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	4.31	3.08	2.52	VA Recommendation
+1	3.78	2.80	2.52	VA Recommendation
+2	3.36	2.57	2.52	VA Recommendation
+3	3.02	2.37	2.52	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%	4.31	3.08	2.52	VA Recommendation
50%	4.50	3.25	2.66	VA Recommendation
100%	4.69	3.41	2.81	VA Recommendation
150%	4.88	3.57	2.95	VA Recommendation
200%	5.06	3.73	3.09	VA Recommendation
250%	5.25	3.89	3.23	VA Recommendation
300%	5.44	4.06	3.37	VA Recommendation

Table 14 – Sensitivity Analyses – VA Operational Cost Increase

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	4.31	3.08	2.52	VA Recommendation
50%	5.62	4.00	3.24	VA Recommendation
100%	6.92	4.91	3.95	VA Recommendation
150%	8.23	5.82	4.66	VA Recommendation
200%	9.53	6.73	5.38	VA Recommendation
250%	10.83	7.65	6.09	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	12.14	8.56	6.80	VA Recommendation

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

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	4.31	3.08	2.52	VA Recommendation
50%	4.98	3.55	2.93	VA Recommendation
100%	5.65	4.02	3.34	VA Recommendation
150%	6.31	4.48	3.74	VA Recommendation
200%	6.98	4.95	4.15	VA Recommendation
250%	7.65	5.42	4.56	VA Recommendation
300%	8.31	5.88	4.96	VA Recommendation

Appendix A – VISN 15 East: Capital and Operational Costs Detail

Table 16 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	2,385,052	2,428,489
Build New GSF	-	1,244,918	1,277,093
Renovate In Place GSF	-	368,742	371,653
Matched Convert To GSF	-	335,671	332,760
Demolition GSF	-	1,619,840	1,619,840
Total Build New Cost	$0	($1,259,177,575)	($1,293,711,034)
Total Renovate In Place Cost	$0	($40,073,700)	($41,802,293)
Total Matched Convert To Cost	$0	($144,704,800)	($142,051,642)
Total Demolition Cost	$0	($63,072,145)	($63,072,145)
Total Lease Build-Out Cost	$0	($86,192,581)	($118,432,593)
Total New Lease Cost	$0	($306,501,656)	($404,298,510)
Total Existing Lease Cost	($174,411,888)	($174,411,547)	($152,445,336)
NRM Costs for Owned Facilities	($1,715,198,663)	($278,437,234)	($283,508,096)
FCA Correction Cost	($498,925,506)	N/A	N/A
Estimated Base Modernization Cost	($2,388,536,058)	($2,352,571,239)	($2,499,321,648)
Additional Common/Lobby Space Needed (GSF)	-	435,721	446,983
Cost of Additional Common/Lobby Space	$0	($372,006,125)	($381,907,851)
Additional Parking Cost	$0	($43,241,656)	($44,317,114)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($10,585,506)	($10,750,862)
Seismic Correction Cost	($161,250,264)	($3,099,662)	($3,099,663)
Non-Building FCA Correction Cost	($68,533,420)	($68,533,418)	($68,533,420)
Activation Costs	$0	($394,663,891)	($394,706,813)
Estimated Additional Costs for Modernization	($229,783,684)	($892,130,258)	($903,315,722)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($2,618,319,741)	($3,244,701,497)	($3,402,637,370)

Table 17 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($10,176,490,785)	($10,176,490,785)	($9,610,921,186)
Fixed Direct	($1,502,989,487)	($1,502,989,487)	($1,365,987,518)
VA Specific Direct	($322,146,832)	($322,146,832)	($313,700,666)
Indirect	($4,635,755,190)	($4,635,755,190)	($4,315,487,895)
VA Specific Indirect	($676,986,916)	($676,986,916)	($630,926,989)
Research and Education	($4,436,514)	($4,436,514)	($3,556,278)
VA Overhead	($934,627,949)	($934,627,949)	($875,981,466)
VA Care Operational Cost Total (PV)	($18,253,433,673)	($18,253,433,673)	($17,116,561,998)
CC Direct	($6,942,933,055)	($6,942,933,055)	($7,357,306,822)
Delivery and Operations	($302,193,185)	($302,193,185)	($316,693,821)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($309,008,598)	($309,008,598)	($324,528,791)
CC Overhead	($389,830,163)	($389,830,163)	($409,237,948)
Admin PMPM	($1,387,688,666)	($1,387,688,666)	($1,351,095,711)
Non-VA Care Operational Cost Total (PV)	($9,331,653,667)	($9,331,653,667)	($9,758,863,093)
Estimated Operational Costs (PV)	($27,585,087,339)	($27,585,087,339)	($26,875,425,091)

Appendix B – VISN 15 East: Benefits Analysis Key Data

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

Demand and Supply

Inpatient

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

Service Line	100% of FY29 In-house Bed Need	120% of FY29 In-house Bed Need	Operating Beds	Supply Adequacy (within 100-120% of in-house demand)
IP CLC	114	137	151	Over Supplied
IP Med/Surg	95	113	133	Over Supplied
IP MH	26	31	46	Over Supplied

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

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

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

Physician Supply Adequacy	Count of Specialties	Percentage
Adequately Supplied	10	37%
Under Supplied	17	63%

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

able 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	79.8%	79.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	81.1%	81.1%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.7%	84.7%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.8%	98.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.7%	99.7%	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	79.8%	79.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	81.1%	81.1%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.7%	84.7%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.8%	98.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.7%	99.7%	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	79.8%	81.4%	Increased 1% or more

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	81.1%	81.5%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	84.7%	90.7%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	98.8%	98.9%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.7%	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 22 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V15) (657) St. Louis-John Cochran	1953	Yes
(V15) (657A0) St. Louis-Jefferson Barracks	1923	Yes
(V15) (657A4) Poplar Bluff	1950	Yes

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V15) (657A5) Marion-Illinois	1940	Yes

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

Inpatient Acute Demand

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

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V15) (657) St. Louis-John Cochran	IP Med	20 ADC	Yes	Maintain
(V15) (657) St. Louis-John Cochran	IP Surg	1,600 Cases	Yes	Maintain
(V15) (657) St. Louis-John Cochran	IP MH	8 ADC	No Service	Open New
(V15) (657A4) Poplar Bluff	IP Med	20 ADC	No	Partner (CCN)
(V15) (657A4) Poplar Bluff	IP Surg	1,600 Cases	No Service	N/A
(V15) (657A4) Poplar Bluff	IP MH	8 ADC	No Service	N/A
(V15) (657A5) Marion-Illinois	IP Med	20 ADC	No	Maintain
(V15) (657A5) Marion-Illinois	IP Surg	1,600 Cases	Yes	N/A
(V15) (657A5) Marion-Illinois	IP MH	8 ADC	No Service	N/A
(V15) (657A0) St. Louis-Jefferson Barracks	IP Med	20 ADC	No Service	N/A
(V15) (657A0) St. Louis-Jefferson Barracks	IP Surg	1,600 Cases	No Service	N/A

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V15) (657A0) St. Louis-Jefferson Barracks	IP MH	8 ADC	Yes	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 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?
(V15) (657) St. Louis-John Cochran	1953	1988	Yes
(V15) (657A0) St. Louis-Jefferson Barracks	1923	1990	Yes
(V15) (657A4) Poplar Bluff	1950	1998	Yes
(V15) (657A5) Marion-Illinois	1940	1972	Yes

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

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

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

Facility	Expands VA's Ability to Recruit/Retain?
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
(V15) (657) St. Louis-John Cochran	No impact on training	Maintains or Has Plan to Transition	Maintains PRC-designation	Increases Research Opportunities
(V15) (657A4) Poplar Bluff	Deactivates IP Acute Service with training	No Research Program	No PRC Designation	Increases Research Opportunities
(V15) (657A5) Marion-Illinois	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities
(V15) (657A0) St. Louis-Jefferson Barracks	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities

VISN 15 West

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

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

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

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

Overview of COAs and Methodology

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

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

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

Summary of Results

The VA Recommendation COA is the leading COA analyzed in the VISN 15 West Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (2.87) is 47.9% lower than the Status Quo COA (5.52) and 28.5% lower than the Modernization COA (4.02).

The VA Recommendation COA is $1.6 B (4.1%) more expensive than the Status Quo COA and $38.7 M (0.1%) 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 7 for the Status Quo COA and 10 for the Modernization COA.

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

Table 27 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($38,658,832,967)	($40,207,341,339)	($40,246,025,759)
Benefit Analysis Score	7	10	14
CBI (Normalized in $Billions)	5.52	4.02	2.87
CBI % Change vs. Status Quo	N/A	-27.2%	-47.9%
CBI % Change vs. Modernization	N/A	N/A	-28.5%

Table 28 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($1,548,508,372)	($2,084,413,733)
Operational Cost Variance vs. Status Quo	N/A	$0	$497,220,941
Estimated Total Cost Variance vs. Status Quo	N/A	($1,548,508,372)	($1,587,192,792)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($38,684,420)

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 29 – 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 15 West Market COA is detailed below.

- Modernize and realign the Leavenworth VAMC by:
  - Converting the emergency department (ED) at the Leavenworth VAMC to an urgent care center
  - Establish a new outpatient facility at the existing Leavenworth VAMC
  - Modernizing the RRTP at the Leavenworth VAMC
- Modernize and realign the Topeka VAMC by:
  - Establishing a strategic collaboration to provide inpatient medical and outpatient surgical services and discontinuing those services at the Topeka VAMC. If unable to enter into a strategic collaboration for those services, consider maintaining the services or utilizing community providers
  - Converting the ED at the Topeka VAMC to an urgent care center and discontinuing emergency services at the Topeka VAMC
- Modernize and realign the Wichita VAMC by establishing a strategic collaboration to add inpatient mental health services. If unable to enter a strategic collaboration for inpatient mental health services, continue to utilize community providers and evaluate the feasibility of providing the services at the Wichita VAMC
- Modernize and realign by establishing a new stand-alone CLC in the vicinity of Kansas City, Missouri
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new CBOC in the vicinity of West Wichita, Kansas
  - Establishing a new CBOC in the vicinity of Derby, Kansas
  - Establishing a new CBOC in the vicinity of Columbia, Missouri
  - Establishing a new CBOC in the vicinity of Iola, Kansas
  - Relocating the St. James CBOC to a new site in the vicinity of Rolla, Missouri, and closing the existing St. James CBOC
  - Relocating the Platte City CBOC to a new site in the vicinity of NW Kansas City, Missouri, and closing the existing Platte City CBOC

- Relocating the Excelsior Springs CBOC to a new site in the vicinity of Liberty, Missouri, and closing the existing Excelsior Springs CBOC
- Relocating all services to the Nevada CBOC and the proposed Iola CBOC and closing the Fort Scott CBOC
- Relocating all services to the Parsons CBOC and the proposed Iola CBOC and closing the Chanute OOS
- Relocating all services to the Paola CBOC and the proposed Iola CBOC and closing the Garnett OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 15 West Market across a 30-year horizon. The cost of the VA Recommendation COA ($40.25 B) was higher than the Status Quo COA ($38.7 B) and the Modernization COA ($40.21 B).

For the VISN 15 West Market, the VA Recommendation COA is $1.6 B (4.1%) more expensive than the Status Quo COA and $38.7 M (0.1%) 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 15 West: Capital and Operational Costs Detail.

Table 30 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($38,658,832,967)	($40,207,341,339)	($40,246,025,759)
Capital Cost Variance vs. Status Quo	N/A	($1,548,508,372)	($2,084,413,733)
Operational Cost Variance vs. Status Quo	N/A	$0	$497,220,941
Non-VA Care Operational Cost Variance	N/A	$0	($442,307,334)
VA Care Operational Cost Variance	N/A	$0	$939,528,275
Estimated Total Cost Variance vs. Status Quo	N/A	($1,548,508,372)	($1,587,192,792)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	($38,684,420)

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 15 West Market across five domains: Demand and Supply, Access, Quality, Facilities and Sustainability, and Mission. The results indicate that the VA Recommendation COA provides the most benefit (greatest Total Benefit Score) in comparison to the Status Quo and Modernization COAs.

Table 31 – 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**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 15 West: Benefits Analysis Key Data. Additional information regarding the scoring methodology is provided in the CBA Methodology.

Demand and Supply

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

The table below shows the scores for VISN 15 West for this domain.

Table 32 – Demand and Supply Scoring Summary

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

Status Quo: The COA received a score of 1 because at least one inpatient service line was over/under supplied, or more than 50% of specialties were inadequately supplied when compared to future Veteran in-house demand. Additionally, no changes to facilities or services were introduced that improve VA's ability to meet 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 Kansas City CLC to provide inpatient community living center services; 62,419 enrollees live within 60 minutes of the proposed facility
- Establishes a new Liberty MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 6,410 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new West Wichita CBOC to provide primary care and outpatient mental health services; there are 5,183 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Derby CBOC to provide primary care and outpatient mental health services; there are 3,295 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Columbia CBOC to provide primary care and outpatient mental health services; there are 3,125 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Rolla MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 4,600 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Expands the St. Joseph CBOC to a MS CBOC, adding specialty care services
- Expands the Junction City CBOC to a MS CBOC, adding specialty care services
- Expands the Honor CBOC to a MS CBOC, adding specialty care services
- Establishes the new Topeka inpatient medicine and surgery, and outpatient surgery partnership
- Establishes the new Wichita inpatient mental health 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 15 West 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 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 15 West for this domain.

Table 34 – 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 15 West for this domain.

Table 35 – Facilities and Sustainability Scoring Summary

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

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

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

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

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

- Establishes the new Topeka inpatient medicine and surgery, and outpatient surgery partnership
- Establishes the new Wichita inpatient mental health 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 15 West for this domain.

Table 36 – Mission Scoring Summary

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

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

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

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

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

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

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

Sensitivity Analysis

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

The table below outlines the sensitivity analysis scenarios completed.

Table 37 – Sensitivity Analysis Scenarios

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

Sensitivity Analysis Results Summary

In the VISN 15 West Market, no scenarios changed the outcome of the CBA.

Sensitivity Analysis Full Results

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

Table 38 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	5.52	4.02	2.87	VA Recommendation
+1	4.83	3.66	2.87	VA Recommendation
+2	4.30	3.35	2.87	VA Recommendation
+3	3.87	3.09	2.87	VA Recommendation

Table 39 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	5.52	4.02	2.87	VA Recommendation
50%	5.78	4.28	3.08	VA Recommendation
100%	6.04	4.54	3.28	VA Recommendation
150%	6.30	4.79	3.49	VA Recommendation
200%	6.55	5.05	3.69	VA Recommendation
250%	6.81	5.31	3.89	VA Recommendation
300%	7.07	5.57	4.10	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%	5.52	4.02	2.87	VA Recommendation
50%	7.25	5.23	3.70	VA Recommendation
100%	8.97	6.43	4.53	VA Recommendation
150%	10.69	7.64	5.36	VA Recommendation
200%	12.42	8.85	6.19	VA Recommendation
250%	14.14	10.05	7.02	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	15.86	11.26	7.84	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%	5.52	4.02	2.87	VA Recommendation
50%	6.30	4.57	3.28	VA Recommendation
100%	7.08	5.11	3.69	VA Recommendation
150%	7.86	5.66	4.09	VA Recommendation
200%	8.64	6.20	4.50	VA Recommendation
250%	9.42	6.75	4.90	VA Recommendation
300%	10.20	7.30	5.31	VA Recommendation

Appendix A – VISN 15 West: Capital and Operational Costs Detail

Table 42 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	3,973,200	4,321,288
Build New GSF	-	2,312,469	2,570,312
Renovate In Place GSF	-	411,107	397,447
Matched Convert To GSF	-	440,260	453,920
Demolition GSF	-	2,667,666	2,667,666
Total Build New Cost	$0	($2,172,821,808)	($2,423,722,841)
Total Renovate In Place Cost	$0	($147,146,332)	($147,196,383)
Total Matched Convert To Cost	$0	($179,319,949)	($184,389,663)
Total Demolition Cost	$0	($98,222,449)	($98,222,449)
Total Lease Build-Out Cost	$0	($101,417,762)	($129,779,111)
Total New Lease Cost	$0	($344,527,433)	($434,998,690)
Total Existing Lease Cost	($98,952,675)	($98,952,368)	($90,536,557)
NRM Costs for Owned Facilities	($2,855,347,096)	($463,841,762)	($504,478,470)
FCA Correction Cost	($467,815,754)	N/A	N/A
Estimated Base Modernization Cost	($3,422,115,525)	($3,606,249,864)	($4,013,324,164)
Additional Common/Lobby Space Needed (GSF)	-	809,364	899,609
Cost of Additional Common/Lobby Space	$0	($659,717,394)	($732,971,666)
Additional Parking Cost	$0	($65,643,944)	($79,411,467)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($14,749,955)	($17,542,015)
Seismic Correction Cost	($19,561,802)	($2,214,090)	($2,214,090)
Non-Building FCA Correction Cost	($170,344,784)	($170,344,781)	($170,344,784)
Activation Costs	$0	($641,610,456)	($680,627,658)
Estimated Additional Costs for Modernization	($189,906,586)	($1,554,280,620)	($1,683,111,680)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($3,612,022,112)	($5,160,530,484)	($5,696,435,844)

Table 43 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($13,388,569,603)	($13,388,569,603)	($12,851,361,162)
Fixed Direct	($1,965,241,517)	($1,965,241,517)	($1,929,157,193)
VA Specific Direct	($473,018,284)	($473,018,284)	($466,211,853)
Indirect	($6,362,051,357)	($6,362,051,357)	($6,082,677,746)
VA Specific Indirect	($684,196,572)	($684,196,572)	($653,593,181)
Research and Education	($4,288,953)	($4,288,953)	($4,171,457)
VA Overhead	($1,252,300,123)	($1,252,300,123)	($1,202,965,541)
VA Care Operational Cost Total (PV)	($24,129,666,409)	($24,129,666,409)	($23,190,138,134)
CC Direct	($7,922,171,999)	($7,922,171,999)	($8,334,884,539)
Delivery and Operations	($356,626,491)	($356,626,491)	($372,838,450)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($366,695,635)	($366,695,635)	($384,597,410)
CC Overhead	($453,455,827)	($453,455,827)	($475,083,670)
Admin PMPM	($1,818,194,495)	($1,818,194,495)	($1,792,047,710)
Non-VA Care Operational Cost Total (PV)	($10,917,144,446)	($10,917,144,446)	($11,359,451,780)
Estimated Operational Costs (PV)	($35,046,810,855)	($35,046,810,855)	($34,549,589,914)

Appendix B – VISN 15 West: Benefits Analysis Key Data

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

Demand and Supply

Inpatient

Table 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	85	102	150	Over Supplied
IP Med/Surg	142	170	255	Over Supplied
IP MH	46	55	115	Over 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	9	33%
Under Supplied	18	67%

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	76.9%	76.9%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	77.9%	77.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	76.7%	76.7%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	97.6%	97.6%	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	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	76.9%	76.9%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	77.9%	77.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	76.7%	76.7%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	97.6%	97.6%	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	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	76.9%	77.2%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	77.9%	77.7%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	76.7%	88.3%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	97.6%	97.6%	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	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 48 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V15) (589) Kansas City-Missouri	1950	Yes
(V15) (589A4) Columbia-Missouri	1972	No
(V15) (589A5) Topeka	1958	Yes
(V15) (589A6) Leavenworth	1933	Yes

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V15) (589A7) Wichita	1932	Yes

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

Inpatient Acute Demand

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

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V15) (589A6) Leavenworth	IP Med	20 ADC	No	Maintain
(V15) (589A6) Leavenworth	IP Surg	1,600 Cases	No	N/A
(V15) (589A6) Leavenworth	IP MH	8 ADC	No Service	N/A
(V15) (589) Kansas City-Missouri	IP Med	20 ADC	Yes	Maintain
(V15) (589) Kansas City-Missouri	IP Surg	1,600 Cases	Yes	Maintain
(V15) (589) Kansas City-Missouri	IP MH	8 ADC	Yes	Maintain
(V15) (589A4) Columbia-Missouri	IP Med	20 ADC	Yes	Maintain
(V15) (589A4) Columbia-Missouri	IP Surg	1,600 Cases	Yes	Maintain
(V15) (589A4) Columbia-Missouri	IP MH	8 ADC	No	Maintain
(V15) (589A5) Topeka	IP Med	20 ADC	No	Partner (VA Delivered)
(V15) (589A5) Topeka	IP Surg	1,600 Cases	No Service	N/A
(V15) (589A5) Topeka	IP MH	8 ADC	Yes	Maintain

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V15) (589A7) Wichita	IP Med	20 ADC	No	Maintain
(V15) (589A7) Wichita	IP Surg	1,600 Cases	Yes	Maintain
(V15) (589A7) Wichita	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 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?
(V15) (589) Kansas City-Missouri	1950	1976	Yes
(V15) (589A4) Columbia-Missouri	1972	1998	No
(V15) (589A5) Topeka	1958	N/A	Yes
(V15) (589A6) Leavenworth	1933	1996	Yes
(V15) (589A7) Wichita	1932	2019	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?
(V15) Topeka IP Partnership	Yes
(V15) Wichita IP Partnership	Yes
(V15) Topeka OP Surg Partnership	Yes

Mission

Table 52 – Mission Key Data Points for Scoring

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

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V15) (589A6) Leavenworth	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V15) (589) Kansas City-Missouri	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V15) (589A4) Columbia-Missouri	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V15) (589A5) Topeka	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V15) (589A7) Wichita	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities