VA Recommendations to the

ASSET AND INFRASTRUCTURE REVIEW COMMISSION

March 2022

Appendix H

Cost Benefit Analysis – VISN 04

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VISN 04 Eastern

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 04 Eastern Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (3.57) is 42.4% lower than the Status Quo COA (6.20) and 24.7% lower than the Modernization COA (4.74).

The VA Recommendation COA is $3.0 B (6.9%) more expensive than the Status Quo COA and $984.9 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 13-point benefits score compared to 7 for the Status Quo COA and 10 for the Modernization COA.

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

Table 1 – CBI Scores by COA

	Status Quo	Modernization	VA Recommendation
COA PV ($)	($43,394,618,312)	($47,394,790,532)	($46,409,899,117)
Benefit Analysis Score	7	10	13
CBI (Normalized in $Billions)	6.20	4.74	3.57
CBI % Change vs. Status Quo	N/A	-23.5%	-42.4%
CBI % Change vs. Modernization	N/A	N/A	-24.7%

Table 2 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($4,000,172,221)	($4,228,221,366)
Operational Cost Variance vs. Status Quo	N/A	$0	$1,212,940,561
Estimated Total Cost Variance vs. Status Quo	N/A	($4,000,172,221)	($3,015,280,805)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$984,891,415

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	3
Mission	2	2	2
Total Benefit Score	**7**	**10**	**13**

VA Recommendation

The VA Recommendation for the VISN 04 Eastern Market COA is detailed below.

- Modernize and realign the Wilmington VAMC by:
  - Relocating inpatient medical and surgical services to community providers and discontinuing those services at the Wilmington VAMC
  - Rescoping the emergency department at the Wilmington VAMC to an urgent care center
  - Modernizing the existing Wilmington VAMC CLC
- Modernize by establishing a new stand-alone RRTP in the vicinity of Wilmington, Delaware
- Modernize and realign the Coatesville VAMC by:
  - Relocating inpatient and outpatient mental health, CLC, RRTP, and outpatient services from the Coatesville VAMC to existing or future VA facilities and discontinuing those services at the Coatesville VAMC
  - Closing the Coatesville VAMC
- Modernize and realign the Philadelphia VAMC by:
  - Establishing a strategic collaboration to provide inpatient medicine and surgery, inpatient mental health, inpatient rehabilitation medicine, CLC, emergency department, and outpatient services and discontinuing those services at the Philadelphia VAMC. If unable to enter into a strategic collaboration, construct a new VAMC with those same services in the vicinity of Philadelphia, Pennsylvania
  - Relocating the RRTP at the Philadelphia VAMC to a new VA facility in the vicinity of Philadelphia, Pennsylvania
  - Closing the existing Philadelphia VAMC
- Modernize and realign services by constructing a new VAMC with CLC, RRTP, and outpatient services in the vicinity of Camden, New Jersey
- Modernize and realign services by constructing a new VAMC with CLC, RRTP, and outpatient services in the vicinity of King of Prussia, Pennsylvania
- Modernize and realign the Wilkes-Barre VAMC by:
  - Constructing a replacement VAMC with CLC, RRTP, and outpatient services in the vicinity of Wilkes-Barre, Pennsylvania

  - Relocating inpatient medical and surgical care, inpatient mental health services, outpatient surgical services, and emergency department services from the Wilkes-Barre VAMC to community providers and discontinuing those services at the Wilkes-Barre VAMC
  - Relocating CLC, RRTP, primary care, outpatient mental health services, and outpatient specialty care provided at the existing Wilkes-Barre VAMC to the replacement VAMC in the vicinity of Wilkes-Barre, Pennsylvania
  - Closing the existing Wilkes-Barre VAMC
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Coatesville, Pennsylvania
  - Relocating the Mechanicsburg MS CBOC to a new site in the vicinity of Mechanicsburg, Pennsylvania and closing the existing Mechanicsburg MS CBOC
  - Establishing a new MS CBOC in the vicinity of Scranton, Pennsylvania
  - Establishing a new MS CBOC in the vicinity of Danville, Pennsylvania
  - Establishing a new CBOC in the vicinity of East Stroudsburg, Pennsylvania
  - Establishing a new CBOC in the vicinity of Hazelton, Pennsylvania
  - Establishing a new CBOC in the vicinity of Gettysburg, Pennsylvania
  - Relocating all services to the proposed Camden VAMC and closing the Camden CBOC
  - Relocating all services to the Elmira MS CBOC and closing the Sayre MS CBOC
  - Relocating all services to the proposed Danville MS CBOC and closing the Berwick CBOC
  - Relocating all services to the Lebanon VAMC and closing the Annville OOS
  - Relocating all services to the proposed Philadelphia strategic collaboration VAMC and closing the Chestnut Street OOS
  - Relocating all services to the proposed Philadelphia strategic collaboration VAMC and closing the Fourth Street OOS

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 04 Western Market across a 30-year horizon. The cost of the VA Recommendation COA ($46.4 B) was higher than the Status Quo COA ($43.4 B) and lower than the Modernization COA ($47.4 B).

For the VISN 04 Eastern Market, the VA Recommendation COA is $3.0 B (6.9%) more expensive than the Status Quo COA and $984.9 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 04 Eastern: Capital and Operational Costs Detail.

Table 4 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($43,394,618,312)	($47,394,790,532)	($46,409,899,117)
Capital Cost Variance vs. Status Quo	N/A	($4,000,172,221)	($4,228,221,366)

	Status Quo	Modernization	VA Recommendation
Operational Cost Variance vs. Status Quo	N/A	$0	$1,212,940,561
Non-VA Care Operational Cost Variance	N/A	$0	($924,245,225)
VA Care Operational Cost Variance	N/A	$0	$2,137,185,785
Estimated Total Cost Variance vs. Status Quo	N/A	($4,000,172,221)	($3,015,280,805)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$984,891,415

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 04 Eastern 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	3
Mission	2	2	2
Total Benefit Score	**7**	**10**	**13**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 04 Eastern: 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 04 Eastern for this domain.

Table 6 – Demand and Supply Scoring Summary

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

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

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

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

- Establishes a new Camden VAMC to provide primary care, outpatient specialty care, outpatient mental health inpatient community living center and inpatient residential rehabilitative services; 105,783 enrollees live within 60 minutes of the proposed facility
- Establishes a new King of Prussia VAMC to provide primary care, outpatient specialty care, outpatient mental health, inpatient community living center and inpatient residential rehabilitative services; 116,554 enrollees live within 60 minutes of the proposed facility
- Establishes a new Wilmington RRTP to provide inpatient residential rehabilitative services; 84,258 enrollees live within 60 minutes of the proposed facility
- Establishes a new Coatesville MS CBOC to provide primary care, outpatient specialty care, outpatient mental health, and urgent care services; there are 5,624 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new Danville MS CBOC to provide primary care, outpatient specialty care, and outpatient mental health services; there are 6,525 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new East Stroudsburg CBOC to provide primary care and outpatient mental health services; there are 5,979 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Gettysburg CBOC to provide primary care and outpatient mental health services; there are 4,015 enrollees for which the proposed facility is the closest VA point of care within 30 minutes

- Establishes a new Hazleton CBOC to provide primary care and outpatient mental health services; there are 3,840 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new Scranton MS CBOC to provide primary care, specialty care, and outpatient mental health services; there are 7,421 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Establishes a new Philadelphia Strategic Collaboration VAMC to provide inpatient medicine and surgery, inpatient mental health, and inpatient community living center services; 103,083 enrollees live within 60 minutes of the proposed facility
- Expands the West Philadelphia CBOC to a MS CBOC, adding specialty care services
- Expands the Georgetown CBOC to a MS CBOC, adding specialty care services
- Expands the Allentown MS CBOC to an HCC, adding outpatient surgery services
- Expands the Dover CBOC to a MS CBOC, adding specialty care services
- Expands the Spring City CBOC to a MS CBOC, adding specialty care services
- Expands the Wyomissing CBOC to a MS CBOC, adding specialty care services
- Expands the Northeast Philadelphia 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 04 Eastern 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 04 Eastern 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 04 Eastern for this domain.

Table 9 – Facilities and Sustainability Scoring Summary

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

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

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

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

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

- Establishes a new Philadelphia Strategic Collaboration VAMC to provide inpatient medicine and surgery, inpatient mental health, inpatient rehabilitation medicine, CLC, emergency department, and outpatient services

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 04 Eastern for this domain.

Table 10 – Mission Scoring Summary

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

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

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

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

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

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

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

Sensitivity Analysis

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

The table below outlines the sensitivity analysis scenarios completed.

Table 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 04 Eastern Market, no scenarios changed the outcome of the CBA.

Sensitivity Analysis Full Results

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

Table 12 – Sensitivity Analyses – Benefit Score Increase

Status Quo and Modernization Benefit Score Change	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
+0	6.20	4.74	3.57	VA Recommendation
+1	5.42	4.31	3.57	VA Recommendation
+2	4.82	3.95	3.57	VA Recommendation
+3	4.34	3.65	3.57	VA Recommendation

Table 13 – Sensitivity Analyses – VA Capital Cost Increase

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
0%	6.20	4.74	3.57	VA Recommendation
50%	6.37	5.06	3.82	VA Recommendation
100%	6.54	5.38	4.08	VA Recommendation
150%	6.70	5.69	4.33	VA Recommendation
200%	6.87	6.01	4.58	VA Recommendation
250%	7.04	6.33	4.84	VA Recommendation
300%	7.21	6.65	5.09	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%	6.20	4.74	3.57	VA Recommendation
50%	8.36	6.25	4.65	VA Recommendation
100%	10.52	7.76	5.73	VA Recommendation
150%	12.68	9.27	6.81	VA Recommendation
200%	14.84	10.79	7.89	VA Recommendation

VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
250%	17.00	12.30	8.97	VA Recommendation
300%	19.16	13.81	10.05	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%	6.20	4.74	3.57	VA Recommendation
50%	6.97	5.28	4.02	VA Recommendation
100%	7.74	5.82	4.47	VA Recommendation
150%	8.51	6.36	4.92	VA Recommendation
200%	9.29	6.90	5.37	VA Recommendation
250%	10.06	7.44	5.83	VA Recommendation
300%	10.83	7.98	6.28	VA Recommendation

Appendix A – VISN 04 Eastern: Capital and Operational Costs Detail

Table 16 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	4,745,416	4,602,762
Build New GSF	-	2,656,027	2,732,198
Renovate In Place GSF	-	560,960	533,644
Matched Convert To GSF	-	598,820	380,651
Demolition GSF	-	2,765,744	3,169,167
Total Build New Cost	$0	($2,783,162,765)	($2,806,663,202)
Total Renovate In Place Cost	$0	($229,957,890)	($220,144,556)
Total Matched Convert To Cost	$0	($276,766,405)	($180,990,785)
Total Demolition Cost	$0	($111,183,503)	($92,721,019)
Total Lease Build-Out Cost	$0	($108,870,213)	($185,457,778)
Total New Lease Cost	$0	($359,320,660)	($597,179,705)
Total Existing Lease Cost	($146,237,154)	($146,236,839)	($129,763,561)
NRM Costs for Owned Facilities	($1,785,613,814)	($553,992,310)	($537,338,491)
FCA Correction Cost	($373,431,037)	N/A	N/A
Estimated Base Modernization Cost	($2,305,282,005)	($4,569,490,584)	($4,750,259,098)
Additional Common/Lobby Space Needed (GSF)	-	929,609	956,269
Cost of Additional Common/Lobby Space	$0	($834,180,062)	($854,995,930)
Additional Parking Cost	$0	($237,242,637)	($290,350,913)

	Status Quo	Modernization	VA Recommendation
Potential Land Acquisition Cost	$0	($10,491,031)	($23,728,773)
Seismic Correction Cost	($91,903)	($36,082)	$0
Non-Building FCA Correction Cost	($53,611,780)	($53,611,776)	($27,602,109)
Activation Costs	$0	($654,105,737)	($640,270,231)
Estimated Additional Costs for Modernization	($53,703,683)	($1,789,667,325)	($1,836,947,957)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$0
Estimated Facilities Costs (PV)	($2,358,985,688)	($6,359,157,909)	($6,587,207,054)

Table 17 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($16,782,666,208)	($16,782,666,208)	($15,533,148,061)
Fixed Direct	($2,107,571,656)	($2,107,571,656)	($2,008,764,330)
VA Specific Direct	($552,701,036)	($552,701,036)	($524,471,267)
Indirect	($8,253,856,851)	($8,253,856,851)	($7,658,572,065)
VA Specific Indirect	($977,449,724)	($977,449,724)	($918,984,180)
Research and Education	($44,954,589)	($44,954,589)	($41,468,007)
VA Overhead	($1,512,151,341)	($1,512,151,341)	($1,408,757,710)
VA Care Operational Cost Total (PV)	($30,231,351,405)	($30,231,351,405)	($28,094,165,620)
CC Direct	($7,668,343,393)	($7,668,343,393)	($8,555,829,988)
Delivery and Operations	($312,530,148)	($312,530,148)	($342,455,115)

	Status Quo	Modernization	VA Recommendation
Care Coordination	($291,719,780)	($291,719,780)	($323,297,725)
CC Overhead	($403,864,563)	($403,864,563)	($443,825,511)
Admin PMPM	($2,127,823,334)	($2,127,823,334)	($2,063,118,104)
Non-VA Care Operational Cost Total (PV)	($10,804,281,218)	($10,804,281,218)	($11,728,526,443)
Estimated Operational Costs (PV)	($41,035,632,623)	($41,035,632,623)	($39,822,692,063)

Appendix B – VISN 04 Eastern: 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	474	568	483	Adequately Supplied
IP Med/Surg	111	133	153	Over Supplied
IP MH	82	98	100	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%

Physician Supply Adequacy	Count of Specialties	Percentage
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

Table 20 – Access Key Data Points for Scoring

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	85.1%	85.1%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	88.9%	88.9%	Maintained within 1%

COA	Measure	Current	Future	Result
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	93.8%	93.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.8%	99.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	85.1%	85.1%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	88.9%	88.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	93.8%	93.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.8%	99.8%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%

COA	Measure	Current	Future	Result
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	85.1%	90.8%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	88.9%	91.4%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	93.8%	99.7%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.8%	99.8%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%

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

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

Quality

Main Patient Care Facility Construction Date

Table 22 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V04) (460) Wilmington-Delaware	1948	Yes

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V04) (542) Coatesville	1930	Yes
(V04) (595) Lebanon	1947	Yes
(V04) (642) Philadelphia-Pennsylvania	1950	Yes
(V04) (693) Wilkes-Barre	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 23 – Quality Key Data Points for Scoring – Inpatient Acute Demand

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V04) (642) Philadelphia	IP Med	20 ADC	Yes	Partner (VA Delivered)
(V04) (642) Philadelphia	IP Surg	1,600 Cases	Yes	Partner (VA Delivered)
(V04) (642) Philadelphia	IP MH	8 ADC	Yes	Partner (VA Delivered)
(V04) (460) Wilmington-Delaware	IP Med	20 ADC	No	Partner (CCN)
(V04) (460) Wilmington-Delaware	IP Surg	1,600 Cases	No	Partner (CCN)
(V04) (460) Wilmington-Delaware	IP MH	8 ADC	No Service	N/A
(V04) (595) Lebanon	IP Med	20 ADC	No	Maintain
(V04) (595) Lebanon	IP Surg	1,600 Cases	Yes	Maintain
(V04) (595) Lebanon	IP MH	8 ADC	Yes	Maintain

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V04) (542) Coatesville	IP Med	20 ADC	No Service	N/A
(V04) (542) Coatesville	IP Surg	1,600 Cases	No Service	N/A
(V04) (542) Coatesville	IP MH	8 ADC	Yes	Relocate
(V04) (693) Wilkes-Barre	IP Med	20 ADC	No	Partner (CCN)
(V04) (693) Wilkes-Barre	IP Surg	1,600 Cases	Yes	Partner (CCN)
(V04) (693) Wilkes-Barre	IP MH	8 ADC	Yes	Partner (CCN)

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?
(V04) (460) Wilmington-Delaware	1948	1995	Yes
(V04) (542) Coatesville	1930	1990	Yes
(V04) (595) Lebanon	1947	2003	Yes
(V04) (642) Philadelphia-Pennsylvania	1950	1993	Yes
(V04) (693) Wilkes-Barre	1950	2001	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?
(V04) Philadelphia Strategic Collaboration VAMC	Yes

Mission

Table 26 – Mission Key Data Points for Scoring

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

Facility	Training Impact	Research Impact	4th Mission Impact	Market Plan Includes New Facilities/Services To Increase Training/Research Opportunities
(V04) (642) Philadelphia	No impact on training	Maintains or Has Plan to Transition	Maintains PRC-designation	Increases Research Opportunities
(V04) (460) Wilmington-Delaware	Deactivates IP Acute Service with training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities
(V04) (595) Lebanon	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities
(V04) (542) Coatesville	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities
(V04) (693) Wilkes-Barre	Deactivates IP Acute Service with training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities

VISN 04 Western

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 04 Western Market due to its leading Cost Benefit Index (CBI) score. The CBI score for the VA Recommendation COA (2.14) is 48.7% lower than the Status Quo COA (4.17) and 33.8% lower than the Modernization COA (3.23).

The VA Recommendation COA is $2.9 B (10.0%) more expensive than the Status Quo COA and $220.2 M (0.7%) 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 15-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 ($)	($29,168,977,930)	($32,297,352,833)	($32,077,164,410)
Benefit Analysis Score	7	10	15
CBI (Normalized in $Billions)	4.17	3.23	2.14
CBI % Change vs. Status Quo	N/A	-22.5%	-48.7%
CBI % Change vs. Modernization	N/A	N/A	-33.8%

Table 28 – Cost Analysis Cost Variance by COA

Cost Variance	Status Quo	Modernization	VA Recommendation
Capital Cost Variance vs. Status Quo	N/A	($3,128,374,903)	($3,095,508,964)
Operational Cost Variance vs. Status Quo	N/A	$0	$187,322,483
Estimated Total Cost Variance vs. Status Quo	N/A	($3,128,374,903)	($2,908,186,481)
Estimated Total Cost Variance vs. Modernization	N/A	N/A	$220,188,423

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

Table 29 – Benefit Analysis Scores by COA

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Demand and Supply	1	2	3
Access	2	2	3
Quality	1	2	3
Facilities and Sustainability	1	2	3
Mission	2	2	3
Total Benefit Score	**7**	**10**	**15**

VA Recommendation

The VA Recommendation for the VISN 04 Western Market COA is detailed below.

- Modernize and realign the Altoona VAMC by:
  - Establishing a strategic collaboration to provide inpatient medical services and discontinuing those services at the Altoona VAMC. If unable to enter into a strategic collaboration, utilize community providers
  - Modernizing the existing Altoona VAMC CLC
- Modernize and realign the Butler VAMC by establishing a strategic collaboration to add outpatient surgical services. If unable to enter into a strategic collaboration, utilize community providers
- Modernize and realign the Erie VAMC by:
  - Establishing a strategic collaboration to provide inpatient medical services and discontinuing those services at the Erie VAMC. If unable to enter into a strategic collaboration, utilize community providers
  - Relocating RRTP services to existing or future VA facilities or a strategic collaboration and discontinuing those services at the Erie VAMC
- Modernize and realign outpatient facilities in the market by:
  - Establishing a new MS CBOC in the vicinity of Pittsburgh, Pennsylvania
  - Establishing a new CBOC in the vicinity of Steubenville, Ohio
  - Relocating all services to the Jamestown CBOC and closing the Warren CBOC

Cost Analysis

The Cost Analysis highlighted the estimated Present Value (PV) of each COA for the VISN 04 Western Market across a 30-year horizon. The cost of the VA Recommendation COA ($32.1 B) was higher than the Status Quo COA ($29.2 B) and lower than the Modernization COA ($32.3 B).

For the VISN 04 Western Market, the VA Recommendation COA is $2.9 B (10.0%) more expensive than the Status Quo COA and $220.2 M (0.7%) 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 04 Western: Capital and Operational Costs Detail.

Table 30 – Total Cost Summary by COA

	Status Quo	Modernization	VA Recommendation
Total Costs (PV)	($29,168,977,930)	($32,297,352,833)	($32,077,164,410)
Capital Cost Variance	N/A	($3,128,374,903)	($3,095,508,964)
Operational Cost Variance vs. Status Quo	N/A	$0	$187,322,483
Non-VA Care Operational Cost Variance	N/A	$0	($58,927,268)
VA Care Operational Cost Variance	N/A	$0	$246,249,751
Total Estimated Cost Variance vs. Status Quo	N/A	($3,128,374,903)	($2,908,186,481)
Total Estimated Cost Variance vs. Modernization	N/A	N/A	$220,188,423

Benefit Analysis

This section describes the non-financial benefit analysis results for the VISN 04 Western 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	3
Facilities and Sustainability	1	2	3

Key Benefit Domain	Status Quo	Modernization	VA Recommendation
Mission	2	2	3
Total Benefit Score	**7**	**10**	**15**

The scoring and rationale within each domain are described in the following sections. The data underlying the analysis is provided in Appendix B – VISN 04 Western: 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 04 Western for this domain.

Table 32 – Demand and Supply Scoring Summary

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

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

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

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

- Establishes a new Steubenville CBOC to provide primary care and outpatient mental health services; there are 3,761 enrollees for which the proposed facility is the closest VA point of care within 30 minutes
- Establishes a new MS CBOC in the vicinity of Pittsburgh, Pennsylvania to provide primary care, specialty care, and outpatient mental health services; there are 9,696 enrollees for which the proposed facility is the closest VA point of care within 60 minutes
- Expands the Jamestown CBOC to a MS CBOC, adding specialty care services
- Expands the Greensburg CBOC to a MS CBOC, adding specialty care services
- Expands the Meadville CBOC to a MS CBOC, adding specialty care services
- Establishes the new Altoona inpatient medicine partnership

- Establishes the new Erie inpatient medicine and surgery partnership
- Establishes the new Butler outpatient surgery partnership

Access

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

The table below shows the CBA access scores for VISN 04 Western 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 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 04 Western for this domain.

Table 34 – Quality Scoring Summary

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

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

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

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

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

- Transition Altoona's low census inpatient medicine program to the inpatient partnership to deliver care via credentialing VA providers in a in a community provider space in the Williamsburg (Blair) area
- Transition Erie's low census inpatient medicine program to the Erie inpatient partnership

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 04 Western 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 Altoona inpatient medicine partnership
- Establishes the new Erie inpatient medicine and surgery partnership
- Establishes the new Butler outpatient surgery partnership

Mission

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

A COA's overall score in the Mission domain is determined by the rounded average (unweighted) of its component (e.g., Education, Research, Emergency Preparedness) scores. The table below shows the scores for VISN 04 Western 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 04 Western 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	4.17	3.23	2.14	VA Recommendation
+1	3.65	2.94	2.14	VA Recommendation
+2	3.24	2.69	2.14	VA Recommendation
+3	2.92	2.48	2.14	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%	4.17	3.23	2.14	VA Recommendation
50%	4.27	3.46	2.29	VA Recommendation
100%	4.38	3.69	2.44	VA Recommendation
150%	4.48	3.92	2.59	VA Recommendation
200%	4.58	4.15	2.75	VA Recommendation
250%	4.69	4.38	2.90	VA Recommendation

VA Capital Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
300%	4.79	4.61	3.05	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%	4.17	3.23	2.14	VA Recommendation
50%	5.74	4.33	2.86	VA Recommendation
100%	7.31	5.43	3.59	VA Recommendation
150%	8.89	6.53	4.32	VA Recommendation
200%	10.46	7.63	5.04	VA Recommendation
250%	12.03	8.74	5.77	VA Recommendation
300%	13.61	9.84	6.49	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%	4.17	3.23	2.14	VA Recommendation
50%	4.57	3.51	2.33	VA Recommendation
100%	4.98	3.80	2.52	VA Recommendation

Non-VA Operational Cost Increase %	Status Quo CBI	Modernization CBI	VA Recommendation CBI	Leader (lowest CBI)
150%	5.39	4.08	2.71	VA Recommendation
200%	5.79	4.37	2.90	VA Recommendation
250%	6.20	4.65	3.10	VA Recommendation
300%	6.60	4.94	3.29	VA Recommendation

Appendix A – VISN 04 Western: Capital and Operational Costs Detail

Table 42 – Capital Costs by COA

	Status Quo	Modernization	VA Recommendation
VAMC Ideal Square Footage	-	3,328,526	3,245,077
Build New GSF	-	1,842,816	1,781,002
Renovate In Place GSF	-	503,547	522,283
Matched Convert To GSF	-	337,177	318,441
Demolition GSF	-	2,006,045	2,006,045
Total Build New Cost	$0	($1,860,863,287)	($1,799,290,803)
Total Renovate In Place Cost	$0	($134,931,012)	($135,365,169)
Total Matched Convert To Cost	$0	($141,601,809)	($134,266,398)
Total Demolition Cost	$0	($77,106,950)	($77,106,950)
Total Lease Build-Out Cost	$0	($71,525,920)	($92,686,074)
Total New Lease Cost	$0	($332,692,814)	($403,920,024)
Total Existing Lease Cost	($194,681,163)	($194,681,030)	($192,969,371)
NRM Costs for Owned Facilities	($1,022,372,296)	($388,580,771)	($378,838,729)

	Status Quo	Modernization	VA Recommendation
FCA Correction Cost	($210,929,218)	N/A	N/A
Estimated Base Modernization Cost	($1,427,982,678)	($3,201,983,594)	($3,214,443,517)
Additional Common/Lobby Space Needed (GSF)	-	644,986	623,351
Cost of Additional Common/Lobby Space	$0	($551,169,260)	($533,400,351)
Additional Parking Cost	$0	($323,996,659)	($318,992,577)
Potential Land Acquisition Cost	$0	($6,340,814)	($6,012,502)
Seismic Correction Cost	$0	$0	$0
Non-Building FCA Correction Cost	($30,549,058)	($30,549,056)	($30,549,058)
Activation Costs	$0	($472,867,257)	($463,496,766)
Estimated Additional Costs for Modernization	($30,549,058)	($1,384,923,046)	($1,352,451,255)
Cost Adjustment: In-Progress Construction	N/A	N/A	$0
Cost Adjustment: In-Progress Lease	N/A	N/A	$12,854,071
Estimated Facilities Costs (PV)	($1,458,531,736)	($4,586,906,639)	($4,554,040,700)

Table 43 – Operational Costs by COA

	Status Quo	Modernization	VA Recommendation
VA Direct	($12,074,274,522)	($12,074,274,522)	($11,959,025,360)
Fixed Direct	($1,259,397,027)	($1,259,397,027)	($1,245,391,346)
VA Specific Direct	($384,286,747)	($384,286,747)	($383,575,062)
Indirect	($6,453,429,729)	($6,453,429,729)	($6,362,949,370)

	Status Quo	Modernization	VA Recommendation
VA Specific Indirect	($749,732,906)	($749,732,906)	($737,091,671)
Research and Education	($50,338,681)	($50,338,681)	($50,338,681)
VA Overhead	($1,054,013,815)	($1,054,013,815)	($1,040,852,187)
VA Care Operational Cost Total (PV)	($22,025,473,429)	($22,025,473,429)	($21,779,223,677)
CC Direct	($3,734,120,982)	($3,734,120,982)	($3,796,202,790)
Delivery and Operations	($164,898,371)	($164,898,371)	($166,815,714)
Care Coordination	($163,133,119)	($163,133,119)	($165,092,862)
CC Overhead	($213,422,317)	($213,422,317)	($215,979,718)
Admin PMPM	($1,409,397,977)	($1,409,397,977)	($1,399,808,950)
Non-VA Care Operational Cost Total (PV)	($5,684,972,765)	($5,684,972,765)	($5,743,900,034)
Estimated Operational Costs (PV)	($27,710,446,194)	($27,710,446,194)	($27,523,123,711)

Appendix B – VISN 04 Western: 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	329	394	430	Over Supplied
IP Med/Surg	109	131	173	Over Supplied
IP MH	67	80	78	Adequately Supplied

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

Source: Enrollee Healthcare Projection Model Base Year 2019

Outpatient

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

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

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

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

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

Table 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	84.4%	84.4%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of VA-provided OP Primary Care	85.9%	85.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of VA-provided OP Specialty Care	95.8%	95.8%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.1%	99.1%	Maintained within 1%
Status Quo	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Status Quo	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Mental Health	84.4%	84.4%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of VA-provided OP Primary Care	85.9%	85.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of VA-provided OP Specialty Care	95.8%	95.8%	Maintained within 1%

COA	Measure	Current	Future	Result
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.1%	99.1%	Maintained within 1%
Modernization	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
Modernization	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Mental Health	84.4%	86.3%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of VA-provided OP Primary Care	85.9%	87.8%	Increased 1% or more
VA Recommendation	% of enrollees within 60 minutes of VA-provided OP Specialty Care	95.8%	98.5%	Increased 1% or more
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Mental Health	99.1%	99.1%	Maintained within 1%
VA Recommendation	% of enrollees within 30 minutes of HPIDN-provided OP Primary Care	99.9%	99.9%	Maintained within 1%
VA Recommendation	% of enrollees within 60 minutes of HPIDN-provided OP Specialty Care	100.0%	100.0%	Maintained within 1%

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

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

Quality

Main Patient Care Facility Construction Date

Table 48 – Quality Key Data Points for Scoring – Age

Facility	Main Patient Care Facility Construction Date	Built Pre-1970?
(V04) (503) Altoona	1950	Yes
(V04) (529) Butler-Pennsylvania	1938	Yes
(V04) (529A4) New Castle Road	2016	No
(V04) (562) Erie	1950	Yes
(V04) (646) Pittsburgh	1954	Yes
(V04) (646A4) Heinz	1994	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
(V04) (503) Altoona	IP Med	20 ADC	No	Partner (VA Delivered)
(V04) (503) Altoona	IP Surg	1,600 Cases	No Service	N/A
(V04) (503) Altoona	IP MH	8 ADC	No Service	N/A
(V04) (562) Erie	IP Med	20 ADC	No	Partner (VA Delivered)
(V04) (562) Erie	IP Surg	1,600 Cases	No Service	N/A
(V04) (562) Erie	IP MH	8 ADC	No Service	N/A
(V04) (646) Pittsburgh-University Drive	IP Med	20 ADC	Yes	Maintain
(V04) (646) Pittsburgh-University Drive	IP Surg	1,600 Cases	Yes	Maintain

Facility	Service	Demand Guideline	Meets or Exceeds Guideline?	VA Recommendation
(V04) (646) Pittsburgh-University Drive	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?
(V04) (503) Altoona	1950	1985	Yes
(V04) (529) Butler-Pennsylvania	1938	N/A	Yes
(V04) (529A4) New Castle Road	2016	N/A	No
(V04) (562) Erie	1950	N/A	Yes
(V04) (646) Pittsburgh	1954	2018	Yes
(V04) (646A4) Heinz	1994	2017	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 51 – Key Data Points for Scoring - Recruitment and Retention

Facility	Expands VA's Ability to Recruit/Retain?
(V04) Altoona IP Partnership	Yes

Facility	Expands VA's Ability to Recruit/Retain?
(V04) Erie IP Partnership	Yes
(V04) Butler 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
(V04) (503) Altoona	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V04) (562) Erie	No impact on training	No Research Program	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities
(V04) (646) Pittsburgh-University Drive	No impact on training	Maintains or Has Plan to Transition	No PRC Designation	Increases Research Opportunities, Increases Training Opportunities