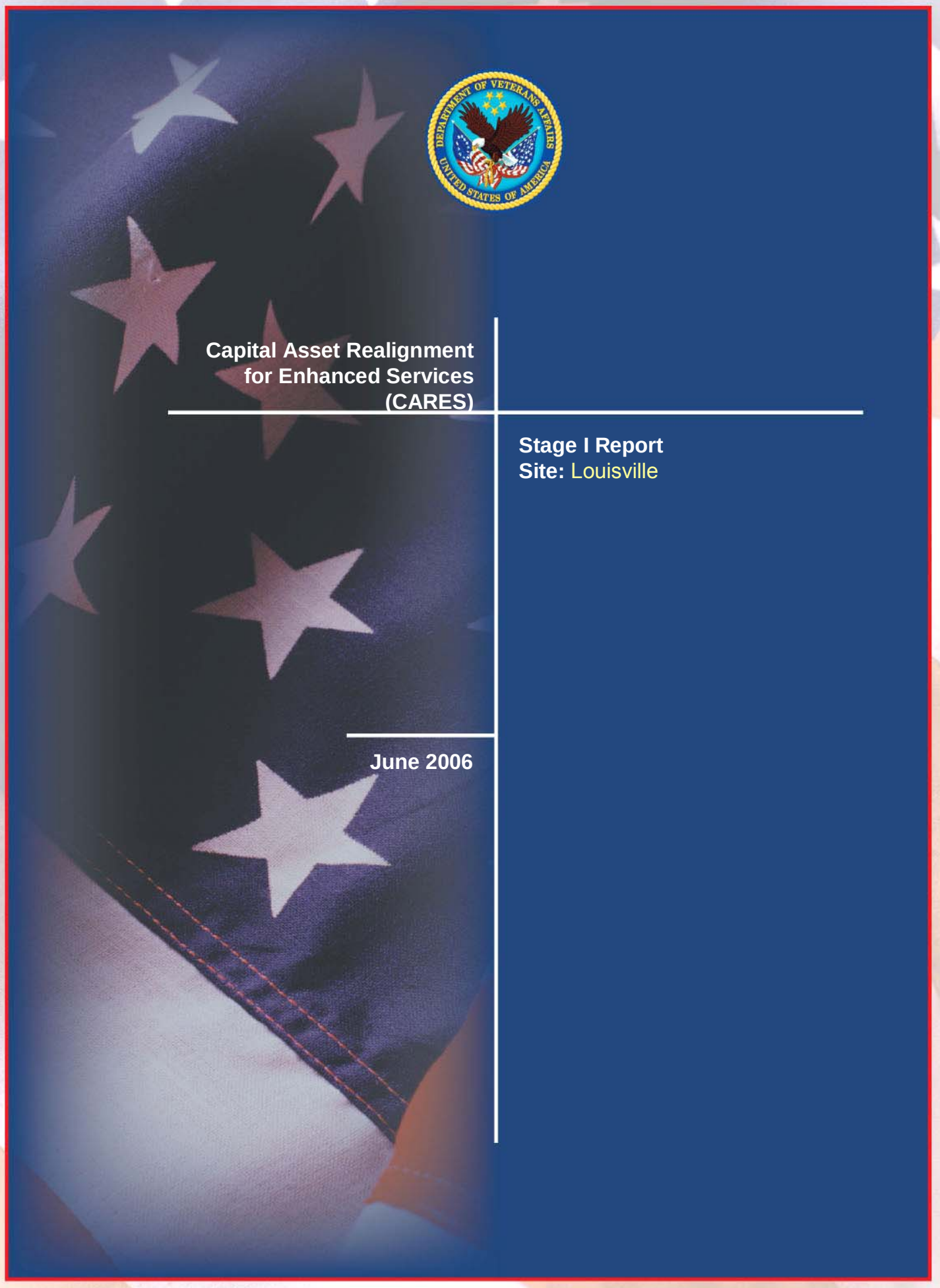

Capital Asset Realignment for Enhanced Services (CARES)

Stage I Report
Site: Louisville

June 2006

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This report was written solely for the purpose set forth in Contract Number V776P-0515 and, therefore, should not be relied upon by any unintended party who may eventually receive this report.

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1.0 Introduction

CARES (Capital Asset Realignment for Enhanced Services) is the Department of Veterans Affairs' (VA's) effort to produce a logical, national plan for modernizing healthcare facilities. The objective is to identify the optimal approach to provide current and projected veterans with healthcare equal to or better than is currently provided in terms of access, quality, and cost effectiveness, while maximizing any potential re-use of all or portions of the current real property inventory owned by VA. The Secretary's Decision Document of May 2004 called for additional studies in certain geographic locations to refine the analyses developed in Phase I of the CARES planning and decision-making process. Team PricewaterhouseCoopers (Team PwC) is assisting VA in conducting VA CARES Business Plan Studies at 17 sites around the United States as selected by the Secretary, which include site-specific requirements for Healthcare Delivery Studies, Capital Plans, and Re-use Plans.

The Secretary's CARES Decision for Louisville, Kentucky provides the following guidance for this study:

- VA will study the need for a replacement hospital for the Louisville VAMC.
- The Louisville VAMC is in need of renovation.
- There is an opportunity to partner with the University of Louisville.
- There is also potential for collocation of a Veterans Benefit Administration (VBA) presence at a new Louisville facility.

2.0 Purpose of this Report

The CARES studies are being performed in three stages: an initial planning phase and two phases centered on option development and selection. This report presents the results of Stage I (option development). In Stage I, Team PwC develops and assesses a broad range of potentially viable business plan options (BPOs) that meet the forecast healthcare needs for the study sites. Based upon an initial analysis of these BPOs, Team PwC recommends up to six BPOs to be taken forward for further development and assessment in Stage II. VA decides which BPOs should be studied further in Stage II. During Stage II, a more detailed assessment is conducted including a financial analysis with refined inputs and consideration of second-order impacts such as the implications on the community. After Stage II, Team PwC recommends a single BPO to the Secretary.

Stakeholder input from veterans, veterans advocates, and the community play an important role in BPO development and assessment. A Local Advisory Panel (LAP) has been established at each study site to ensure veterans' issues and concerns are heard throughout the study process. Veterans' and other stakeholder views are presented at a series of public meetings and through written and electronic communication channels.

Team PwC has prepared this report in accordance with the CARES Business Plan Studies Methodology and Statement of Work (SOW) for the CARES studies. The SOW calls for submission in Stage I of a range of BPOs that are at the concept stage and represent feasible

choices that have the potential to meet VA objectives. In Stage II, Team PwC will further develop selected BPOs into technical data driven analyses and a recommended primary BPO.

3.0 Site Overview

The Louisville VAMC is located in Louisville, Kentucky and is a part of the Veterans Integrated Service Network (VISN) 9 Northern market, which also includes facilities in Tennessee and West Virginia. The VISN 9 Northern market has about 118,000 enrolled veterans. The Louisville VAMC is approximately 80 miles from the Lexington, KY VAMC, approximately 105 miles from the Cincinnati, OH VAMC (part of VISN 10), 118 miles from the Indianapolis, IN VAMC (part of VISN 11), and approximately 200 miles from the Huntington, WV VAMC (part of VISN 9).

Current Healthcare Provision

The Louisville VAMC is an affiliated acute inpatient and ambulatory care facility located on a 47-acre hilltop near downtown Louisville, overlooking the Ohio River. It is a tertiary care facility with 114 operating beds. The Louisville VAMC is a teaching hospital, providing a full range of patient care services, as well as education and research. Comprehensive healthcare is provided through primary, acute, and tertiary care in the fields of medicine, surgery, psychiatry, physical medicine and rehabilitation, neurology, oncology, dentistry, geriatrics, and extended care. There is a newly renovated emergency department.

In early 2004, the medical center opened a new eye clinic, dental suite (12 treatment rooms) and completely updated prosthetics department. The facility has a newly-renovated ambulatory surgery unit (5 bays).

Ambulatory and inpatient medicine and surgery services are supported by basic diagnostic ancillaries, including CT scan, MRI, angiography, echocardiology, electroencephalography, electromyography, ultrasound, neuroradiology, and nuclear medicine. Not provided on campus are mammography and positron emission tomography (PET) scans. Clinical laboratory services include routine and special chemistry, cytopathology, GLC mass spectroscopy, immunohistochemistry, microbiology, serology, and surgical pathology. Some specialized laboratory testing services are referred out.

The VAMC also operates community based outpatient clinics (CBOCs) and behavioral health clinics in the greater Louisville area and at Fort Knox, KY, and New Albany, IN. A significant portion of the primary care workload has been moved to the CBOCs. These clinics make VA services more accessible for veterans residing in the greater Louisville area. Additionally, the Louisville VAMC operates a clinic at the Ireland Army Hospital at Fort Knox, Kentucky and one at the Louisville National Guard complex for TRICARE beneficiaries. The Louisville VAMC also has numerous sharing agreements with the Ireland Army Community Hospital at Fort Knox. An inpatient agreement is in place for the VAMC to provide psychiatry, medical, surgical, neurological, and sleep studies for the Army Hospital.

Tertiary services not provided at the Louisville VAMC are referred either to other VAMCs in the VISN or contracted out to community providers. Examples of these referred services are allergy, dialysis, cardiac surgery, and transplants. VA specialized programs in blind rehabilitation and spinal cord injury are provided at other VAMCs.

Access

Analysis of drive time information for enrollees in the Northern market of VISN 9 indicates that VA's drive time guideline is met for acute hospital and tertiary care, but not for primary care (see Table 1). Drive time guidelines at the market level are as follows: 70% of enrollees for primary care and 65% of enrollees for acute hospital and tertiary care should be within the minimum travel times to a VA facility. Currently, the Northern market area falls short of the access guidelines for primary care by 8%. For acute hospital care, the percent of enrollees within the driving time threshold exceeds the access guidelines by 20%. For tertiary care, 100% of the enrollees for the Northern market meet the drive time guideline.

Table 1: Percentage of Enrollees Meeting VA Access Guideline Drive Times for the Northern Market

VA Drive Time Guidelines					
Primary Care		**Acute Hospital**		**Tertiary Care[1]**	
% of Enrollees Within Minimum Drive Times	**Meets Threshold**	**% of Enrollees Within Minimum Drive Times**	**Meets Threshold**	**% of Enrollees Within Minimum Drive Times**	**Meets Threshold**
61.6%	No	85.3%	Yes	100%	Yes

The CARES Decision Document identified three new CBOCs planned to improve access in the VISN 9 Northern Market. If these CBOCs are opened, they will also relieve the ambulatory care demand pressure exerted in primary and specialty care at the Louisville VAMC. These three CBOCs and the impact they will have on the access guideline will be further investigated in Stage II.

Quality

The measures listed below (see Table 2) provide a selective description of current healthcare clinical quality at Louisville VAMC, along with corresponding results at the VISN and national levels. This set of measures was chosen by PwC and VA experts based on available internal VA data, and compatibility with the Centers for Medicare and Medicaid Services (CMS) and industry standards. These quality measures in relation to the CARES healthcare study serve as a benchmark for comparison with the BPOs that transfer care to community providers to determine the potential for any significant quality impacts when care is not directly provided by VA, or when one VA facility is transferring care to another VA facility. Although the quality measures gathered for analysis are based on 2004 data, for the evaluation of quality of care for the year 2023, Team PwC assumes a linear relationship with this current data.

[1] Tertiary care data is based on 2001 figures. All other information is based on 2003 figures.

According to 2004 data, the Louisville VAMC achieved higher selected quality scores for ambulatory care and patient satisfaction for ambulatory care than overall national scores. However, the Louisville VAMC achieved the same or lower quality scores for heart failure, mental health, and inpatient satisfaction.

Table 2: Quality Measures

Clinical Setting	Indicator	Indicator Origin	Louisville '04 Result	VISN #9 04 Result	VA National '04 Result
Inpatient Care					
Heart Failure	Ace inhibitor for left ventricular dysfunction as a key inpatient measure	VA, CMS	**86%**	**91%**	**92%**
Ambulatory Care					
Colorectal Cancer	Screening rates as a key ambulatory indicator	VA, HEDIS[2]	**82%**	**73%**	**72%**
Endocrinology	Full lipid profile in the past two years	VA, HEDIS	**97%**	**97%**	**96%**
Mental Health					
Major Depressive Disorder	% of patients with a new diagnosis of depression -- medication coverage	VA, HEDIS	**65%**	**75%**	**67%**
Global Index	Weighted average of seven mental health indicators [3]	VA, CMS	**53%**	**53%**	**54%**
Patient Satisfaction					
Ambulatory Care	% of surveyed patients rating overall Ambulatory Care Services as very good or excellent.	VA, Industry	**81%**	**73%**	**76%**
Inpatient Care	% of surveyed patients rating overall Inpatient Services as very good or excellent.	VA, Industry	**70%**	**71%**	**74%**

In Stage II, Team PwC will continue to conduct a comparable assessment to determine the impacts on quality of care by investigating additional quality measures pertinent to the various BPOs selected for further study. In addition, Team PwC will assess the impacts on quality by studying the impact on specialized services, continuity of care, and enhancement of services. All of these studies will provide information on the potential impacts to quality and aid Team PwC in recommending a BPO for implementation at the conclusion of Stage II.

Local Healthcare Market

The greater Louisville healthcare market has approximately 15 acute care hospitals. The market is dominated by five non-profits: Norton Healthcare, Jewish Hospital Healthcare

[2] HEDIS stands for Health Plan Employer Data and Information Set, which is a set of standardized performance measures used to compare performance of managed healthcare plans.

[3] See Glossary for description of indicators.

Services, Baptist Healthcare System, Caritas Health Services, and the University of Louisville Hospital. The Louisville Medical Center campus, which is about five miles from the Louisville VAMC, is comprised of three hospitals, Norton Hospital, Jewish Hospital and the University of Louisville Hospital.

University of Louisville Hospital, Louisville, KY

The University of Louisville Hospital is a part of the University of Louisville and is in a joint management arrangement with Norton Hospital and Jewish Hospital. It is a highly regarded research and education hospital and is the primary adult teaching hospital. It has a Level I trauma center.

The University of Louisville Hospital houses 283 acute beds with no non-acute beds. The acute bed count includes 65 ICU beds. Total facility occupancy was approximately 88%.[4] It is Joint Commission of Accredited Healthcare Organizations (JCAHO) accredited.

Norton Healthcare, Louisville, KY

Norton Healthcare is a network that consists of five acute-care hospitals in the Louisville area. In total, Norton Healthcare's five hospitals house 1,275 beds and offer a wide range of inpatient and ambulatory care services. The latest available data indicated that Norton Healthcare's hospitals have 1,175 acute and 100 non-acute beds. The acute bed count includes 251 ICU beds. Norton Healthcare has an occupancy rate of approximately 72%.[5] It is managed by a voluntary non-profit organization, and accredited by JCAHO.

Jewish Hospital Healthcare Services, Louisville, KY

Jewish Hospital Healthcare Services is a 577-bed acute care facility offering a wide range of inpatient and ambulatory care services. The latest available data indicated that Jewish Hospital Healthcare Services houses 422 acute and 135 non-acute beds. The acute bed count includes 53 ICU beds. Total facility occupancy was approximately 73%.[6] It is managed by a voluntary non-profit organization and accredited by JCAHO.

Baptist Hospital East, Louisville, KY

Baptist Hospital East is a 407-bed acute care facility offering a wide range of inpatient and ambulatory care services. The latest available data indicated that Baptist Hospital East houses 356 acute and 51 non-acute beds. The acute bed count includes 18 ICU beds. Total facility occupancy was approximately 86%.[7] It is managed by a voluntary non-profit organization, accredited by JCAHO.

[4] Solucient, 2004

[5] *Ibid*

[6] *Ibid*

[7] *Ibid*

Caritas Health Services, Louisville, KY

Caritas Health Services is a 473-bed acute care facility offering a wide range of inpatient and ambulatory care services. The latest available data indicated that Caritas Health Services houses 417 acute and 56 non-acute beds. Total facility occupancy was approximately 76%.[8] It is managed by a voluntary non-profit organization and accredited by JCAHO.

Referral Patterns

Special attention to referral patterns to and from other VAMCs was requested in the CARES statement of work for the Louisville VAMC study. Referral patterns, in this context, involve initially looking at patient origin. The Louisville VAMC patient base is primarily from VISN 9. About 95% of patients using ambulatory services and about 93% of patients using inpatient services in 2003 were from VISN 9. These percentages are similar to many other VAMCs.

Facilities

The buildings, parking, and related improvements were constructed over a period of four years between 1947 and 1951. The main hospital building is well maintained but has significant fire and life safety issues regarding the location of stairways and fire ratings of chases. A JCAHO Statement of Condition report identifies major code violations. A letter from JCAHO dated September 15, 1993 approved VA's plan to provide sprinklers, smoke detectors, and a fire alarm system directly connected to the fire department for an indefinite period of time or until any renovations or improvements are undertaken. However, the structural issues make it very difficult to create a safe, modern, and secure environment. At the current capacity, very little transitional space is available.

A physical description of the campus follows:

Physical Description

The Louisville VAMC is located at 800 Zorn Avenue in Louisville, Kentucky. The site occupies the southwestern quadrant of the intersection of Zorn Avenue and Mellwood Avenue and is roughly square in shape, containing a total area of an estimated 47 acres. It is close to the Ohio River which forms the border between Kentucky and Indiana, and is also close to Interstate Highway 71.

The campus is composed of the main hospital building (Building 1) and 15 outbuildings. There are no historic structures on the campus. Building 1 contains approximately 498,000 square feet, which is about 88% of the total space on the campus. Floor to floor heights in Building 1 are at minimum (with low "height" function scores ranging from 1.5 to 4.0). Generally the floor to floor heights are about 12 feet compared to today's standards of 16 to 20 feet. Engineering systems are located throughout the main corridors of each floor.

[8] *Ibid*

Topography is steep and tree-covered, with surface water draining from the center of the site generally to the north and south. A ravine is located just north of the center of the site. There are two sinkholes located in the southwest portion of the property. It is reported that there are minor caves within the property boundary. However, the presence of these formations and any surface access points has not been verified. The northeast portion of the property is located in the flood plane of the Ohio River.

Easements are located along the main entrance road for access to the adjacent residential development to the south. Utility easements are also located along Zorn Avenue and at the northeast portion of the property.

An asbestos containing materials (ACM) survey at the Louisville VAMC identified the presence of ACMs in the buildings and structures built in the 1950s. The cost for ACM abatement is not available. The site may also contain lead in surface paint due to the age of the facilities. A limited lead-based paint survey indicated that the lead concentrations in the paint were above the guidelines from the Department of Housing and Urban Development (HUD). Therefore, it may be necessary to conduct ACM and lead paint abatement for any potential re-use consideration. The county (including the Louisville VAMC) is designated as a federal EPA Radon Zone 1 for potential elevated indoor radon levels. Therefore, radon is a concern in the area of the site.

Figure 1 presents the existing building distribution for the Louisville campus. A list of the buildings on campus, their size and function are presented in Table 3. Total gross square footage of 568,752 square feet is consistent with VA's Capital Asset Inventory (CAI) database reporting.

Figure 1: Existing Building Distribution

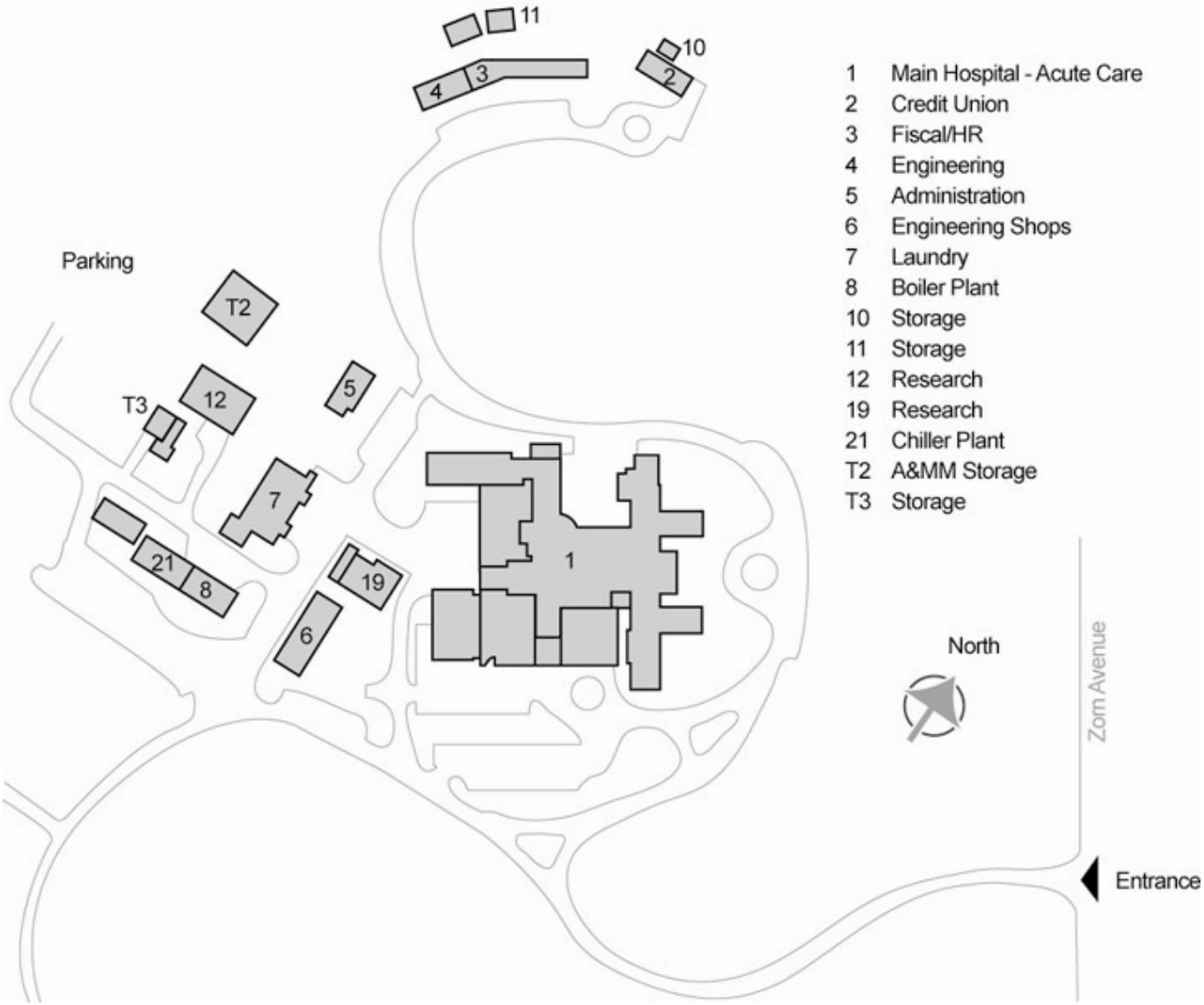


Table 3: Existing Departmental Distribution by Building[9]

Building	Floor/ Stories	Year Built	Gross Sq. Ft.	Function(s)
Building 1	12	1952	497,700	Main Hospital
	Ground Level			Supply Processing, Pharmacy, Prosthetics, Common
	First Floor			Ambulatory Care, SPD, Common
	Second Floor			Audiology, Canteen, Cardiology, Radiology
	Third Floor			Ambulatory Care, Dental, Pathology
	Fourth Floor			Inpatient Beds, MICU, SICU, Surgical
	Fifth Floor			Inpatient Beds, Endoscopy
	Sixth Floor			Inpatient Beds, CCU
	Seventh Floor			Behavioral Beds, Geriatrics
	Eighth Floor			Directors Suite, IRM
	Ninth Floor			Medical Research and Development
	Tenth Floor			Mechanical
	Eleventh Floor			Mechanical
Building 2	1	1952	1,930	Credit Union
Building 3	2	1952	10,800	Fiscal and Personnel
Building 4	2	1952	5,000	Medical, Media and Engineering
Building 5	1	1952	2,700	Administrative
Building 6	1	1952	5,000	Engineering Shops
Building 7	1	1952	17,000	Laundry
Building 8	3	1952	4,982	Boiler Plant
Building 10	1	1952	400	Storage
Building 11	1	1952	1,100	Storage
Building 12	1	1954	7,900	Animal Research
Building 15	1	1952	40	Meter House
Building 19	2	1952	8,300	Clinical Research
Building 21	1	1972	3,200	Air Conditioning Plant
Building T1	1	1952	1,500	Storage
Building T3	1	1986	1,200	Storage

Current and Forecast Investment Requirements

Significant capital investments are required for the facility to meet modern, safe, and secure standards. Included are $39 million in periodic and maintenance costs that have been identified within VA's CAI database. These costs include roof coverings, elevators, air handling equipment, and electrical systems.

[9] Source: VA Capital Asset Inventory Database

Summary of Current Surplus / Vacant Space

There is no significant vacant space on the campus.

Real Estate Market and Re-Use Potential

This section describes the real estate market and re-use potential of the Louisville campus. The population of Jefferson County grew by 5.3% between 1990 and 2004, totalling 700,300 residents. This annualized increase of about 0.37% per year has resulted in a fairly stable economy.

A considerable variety of housing products and price levels surround the Louisville VAMC campus. In terms of the currently soft rental market, several older apartment projects offer a mix of one, two, and three bedroom apartments and do not charge for parking. Near-term oversupply of residential could be related to low housing price growth in the market.

Class A office space, large retail, and hotels are concentrated in other areas of the city and county. While both office space and retail are concentrated away from the site, office space has recently shown an upward trend in Class A space and a downward trend in Class B space, and market dynamics for retails remain strong.

The hotel market added about 235 rooms per year between 2000 and 2005, with some construction occurring downtown related to the downtown convention and entertainment project. The lack of supporting commercial and retail uses near the Louisville VAMC and the high concentration of hotels downtown would make initial prioritization of hotels difficult. However, looking longer-term, Team PwC could envision a smaller hotel project built as part of a mixed-use re-use plan for the entire site, assuming that access issues can be resolved.

Office re-use is considered a low priority, in that the area is not a defined office market, and there are few if any supporting uses in immediate proximity. Office development as a supporting use to residential or retail use could be envisioned, albeit as part of a higher density mixed-use re-use option for the entire site. Additionally, light/heavy industrial and flex space development appears to be incompatible with uses adjacent to the site, which are entirely residential in character.

The larger neighborhood around the VA site appears to be in need of adjacent neighborhood / community level retail services, with the nearest concentrations about five miles to the east along I-71, or two-three miles to the south along Brownsboro Road. Importantly, given the VA site's clear access limitations, any retail component would have to be considered carefully. To the extent that site access issues can be clarified, a 25,000 to 75,000 square foot retail program would be envisioned, focusing on community services, with a drug store or grocery store anchor.

Although current market dynamics are suspect, re-use options for the VA site will likely be looking forward 3 to 5 years, when market economics will likely have shifted. The VA site would appear to be very competitive for new residential construction, given its impressive views

of the Ohio River and downtown. Challenges will relate to questions of zoning, allowable densities, and adjacency concerns (particularly to the south). Site access and security are also relevant issues, particularly for re-use options that include a new hospital on the existing site. As the property is currently zoned R-1 (low density housing), a zoning change would be needed to support higher density apartment or condominium development.

Re-Use Potential

The topography of the Louisville VAMC is not favorable to re-use. The rapid gain in slope on the site creates complex access challenges that would have negative security and access implications for higher density commercial office development, retail uses that generate higher traffic volume, or light/heavy industrial development. The physical limitations to re-use result in only one re-use parcel with significant value. This re-use parcel is the entire site as described in Table 4. The parcel and its potential re-uses (see Figure 2) can be summarized as follows:

Table 4: Re-use Parcels and Descriptions

Parcel	Description	Re-Use Potential
Parcel A	Entire site of about 47 acres.	Possible condominium or apartment

Figure 2: Parcel Map of Louisville Campus[10]

[10] Due to topography and limited access, there is only one re-use parcel: the entire site.

Residential (condominiums or apartments) presents the most feasible primary re-use opportunity, with office, retail, and hotel opportunities discussed only as supporting uses. Although apartment re-use would generate annual income (off of a ground lease, for example), a condominium project may better capture the site's value. Adjacent condominium and single-family development to the east would provide positive reinforcement with an upper income redevelopment program. Existing apartment development to the west is less supportive. Further, there are not likely to be prospects for the hospital building as is, and the cost of demolition is expected to be high. Therefore, re-use is not a determining factor in evaluating business plan options. However, this would not preclude VA from attempting to generate income from excess property once the final decision has been made.

4.0 Overview of Healthcare Demand and Trends

Veteran enrollment and utilization for healthcare services was projected by VA for 20 years, using 2003 data as supplied by VA as the base year and projecting through 2023. Projected utilization data is based upon market demand allocated to the Louisville VAMC. The following section describes the long-term trends for veteran enrollment and utilization for healthcare services at the Louisville VAMC.

Enrollment Trends

Louisville VAMC is located in the Northern market of VISN 9. The Northern market contains approximately 118,000 enrolled veterans. The number of enrolled veterans for the Northern market is expected to decline 16% from 118,000, to approximately 98,000 by 2023.

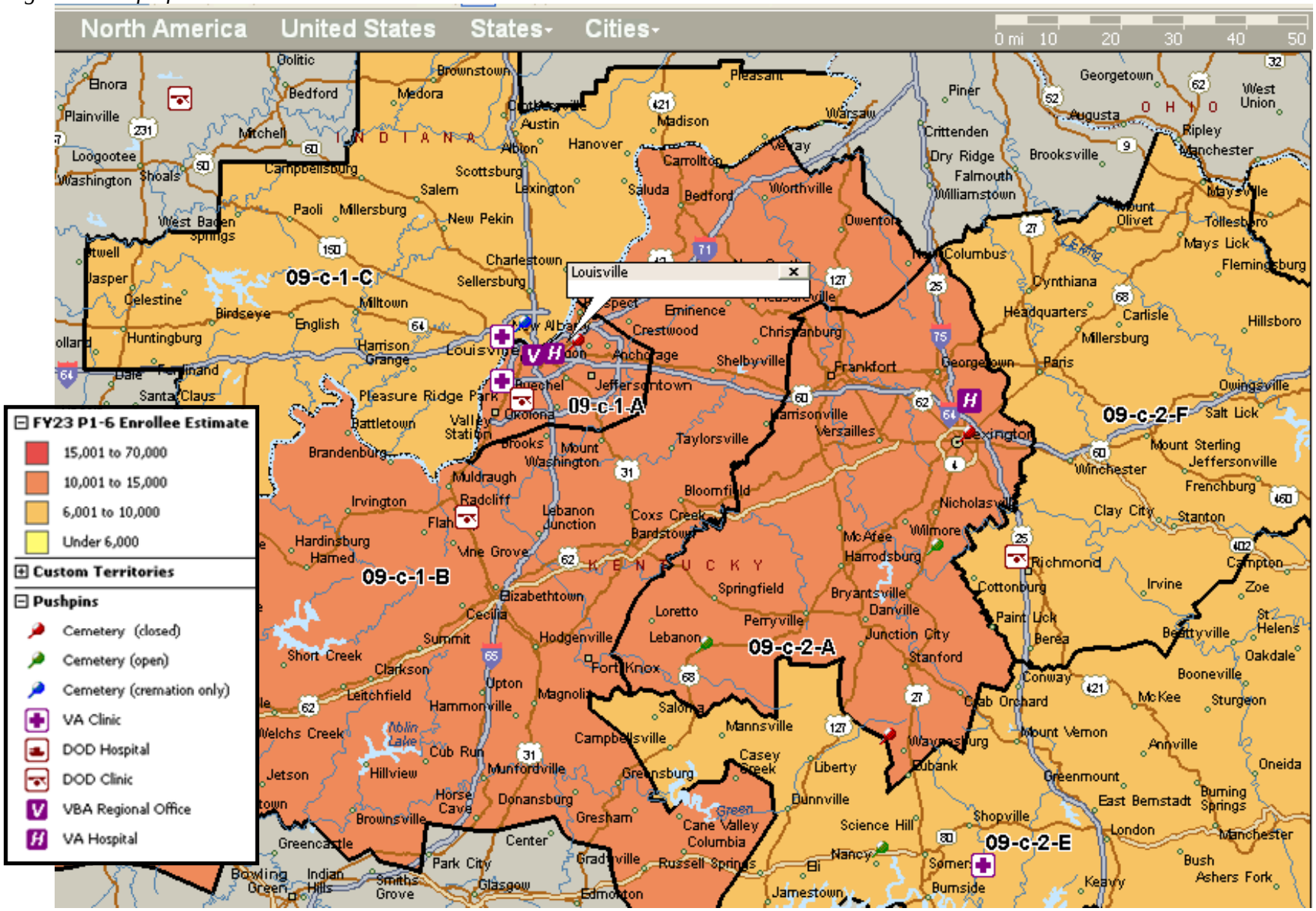
Enrollment projections for the market differ by priority group. Enrollment of Priority 1-6 veterans (those veterans with the greatest service-connected needs) is projected to increase by 1%, while enrollment for Priority 7-8 veterans is projected to decrease by 59% for the same period (see Table 5). The enrollment forecast for Priority 7-8 veterans assumes an annual enrollment fee, and the continued freeze on P8 enrollment. The enrolled veteran population is also aging. Enrolled veterans aged 65 and over will increase from 51,000 to 55,000 by 2023.

Table 5: Projected Veteran Enrollment for the Northern Market by Priority Group

Fiscal Year	Enrolled 2003	Projected 2013	% Change (2003 to 2013)	Projected 2023	% Change (2003 to 2023)
Priority 1-6	83,882	94,765	13%	84,460	1%
Priority 7-8	33,712	16,382	-51%	13,832	-59%
Total	**117,594**	**111,147**	**-5%**	**98,292**	**-16%**

The Northern market - Louisville sub market is shown in Figure 3. As shown, both the Louisville and Lexington VAMCs are in the Northern market.

Figure 3: Map of Northern Market - Louisville sub market



Utilization Trends

Utilization was analyzed for those CARES Implementation Categories (CICs) for which the Louisville VAMC facilities have projected demand. A summary of utilization data is provided for each CIC in the following tables. Inpatient utilization is measured in number of beds, while both ambulatory and outpatient mental health utilization is measured in number of clinic stops. A clinic stop is a visit to a clinic or service rendered to a patient. A summary of utilization data is provided for each CARES CIC. As demonstrated in Table 6, inpatient bed need is projected to increase by 48% from 93 to 138 beds by 2023, while outpatient clinic stops (including radiology and pathology) are expected to increase slightly over the same period with a 4% increase.

Table 6: Inpatient and Outpatient Utilization Summary

Louisville	2003 Actual	2013 Projected	2023 Projected	% Change (2003 to 2013)	% Change (2013 to 2023)	% Change (2003 to 2023)
Total Inpatient Beds	93	151	138	62%	-9%	48%
Total Clinic Stops	347,745	370,425	361,890	7%	-2%	4%

The demand for inpatient services varies by CIC (see Table 7). The demand for both medicine/observation and surgery show a significant increase over the first ten years of the period, but the growth slows over the final 10 years. Overall medicine/observation beds increase by 28% to 68 beds, while surgery beds increase from 23 to 26 beds by 2023. Demand for psychiatry and substance abuse beds shows a 175% increase from 16 beds to 44 beds in 2023. Other VA Mental Health Inpatient Programs (PRRTP) increases from 1 to 10 beds in 2023. These increases reflect significant demand in the market for these categories of care and assumptions concerning the utilization rates for these services consistent with the VA Mental Health Strategic Plan.

Table 7: Projected Utilization for Inpatient CICs for Louisville VAMC

CARES Implementation Category (CIC)	2003 Actual	2013 Projected	2023 Projected	% Change (2003 to 2013)	% Change (2013 to 2023)	% Change (2003 to 2023)
Medicine & Observation	53	75	68	42%	-9%	28%
Psychiatry & Substance Abuse	16	35	34	119%	26%	175%
Surgery	23	31	26	35%	-16%	13%
Other: VA Mental Health Inpatient Programs	1	0	0	-100%	N/A	-100%
Psychiatric Residential Rehab Treatment Program (PRRTP)	0	10	10	N/A	0%	N/A
Total	**93**	**151**	**138**	**62%**	**-9%**	**48%**

Utilization of ambulatory CICs at Louisville VAMC increases by 14% through 2023. The majority of the increase in ambulatory utilization (not including radiology and pathology) is due to large increases in demand for specialty areas such as: cardiology, orthopedics, eye clinic and urology. This can be explained by the needs of an aging veteran population, together with the

trend towards using specialty over primary care services. Rehabilitation medicine remains constant during the projected period due to a planning assumption by VA.

Table 8: Projected Utilization for Ambulatory CICs for Louisville VAMC

CARES Implementation Category (CIC)	2003 Actual	2013 Projected	2023 Projected	% Change (2003 to 2013)	% Change (2013 to 2023)	% Change (2003 to 2023)
Cardiology	6,964	16,266	15,557	134%	-4%	123%
Eye Clinic	11,264	17,918	17,940	59%	0%	59%
Non-Surgical Specialties	34,286	29,284	28,613	-15%	-2%	-17%
Orthopedics	8,100	14,059	13,718	74%	-2%	69%
Primary Care & Related Specialties	62,515	79,961	72,253	28%	-10%	16%
Rehab Medicine	22,861	22,861	22,861	0%	0%	0%
Surgical & Related Specialties	30,947	25,620	24,393	-17%	-5%	-21%
Urology	2,589	9,743	10,051	276%	3%	288%
Total	**179,526**	**215,712**	**205,386**	**20%**	**-5%**	**14%**

Utilization of outpatient mental health CICs for Louisville shows a significant increase over the 20-year forecast period. These increases reflect assumptions concerning the utilization rates for these services consistent with the VA Mental Health Strategic Plan. Demand for behavioral health services increases by 32% through 2023. The homeless mental health program is projected to grow by 142% by 2023. A lack of current space on the main campus has led VA to lease space off campus to provide mental health and behavioral health services

Table 9: Projected Utilization for Outpatient Mental Health CICs for Louisville VAMC

CARES Implementation Category (CIC)	2003 Actual	2013 Projected	2023 Projected	% Change (2003 to 2013)	% Change (2013 to 2023)	% Change (2003 to 2023)
Behavioral Health	26,498	34,855	35,040	32%	1%	32%
Mental Health Program: Homeless	1,871	5,334	4,523	185%	-15%	142%
Total	**28,369**	**40,189**	**39,563**	**42%**	**-2%**	**39%**

In summary, projected utilization for healthcare services appears to vary over the next 20 years, but generally reflects increased demand requirements for both inpatient and outpatient care. Specifically, with regards to inpatient care; medicine/observation and surgery demand increase steadily over the projected period and demand for psychiatry and substance abuse beds shows a dramatic increase. With regards to ambulatory and outpatient mental health services; demand is increasing for several categories of care associated with the needs of aging veterans, such as: cardiology, orthopedics, eye clinic, and urology. In addition, demand is increasing for behavioral health and mental health programs for the homeless. This presents opportunities and challenges for VA in facility planning for the future.

The space requirements to deliver the projected volume of health services in a modern, safe, and secure environment were calculated using Team PwC's capital planning methodology. The

Louisville VAMC does not currently have sufficient space to accommodate the utilization for inpatient and outpatient services through 2023. The projected shortfall (assuming 569,000 square feet of existing space and 49,000 square feet of leased space to provide current services) is 44,000 square feet. BPOs will consider current clinical inventory and the impacts of changes in demand on the space requirements for these services.

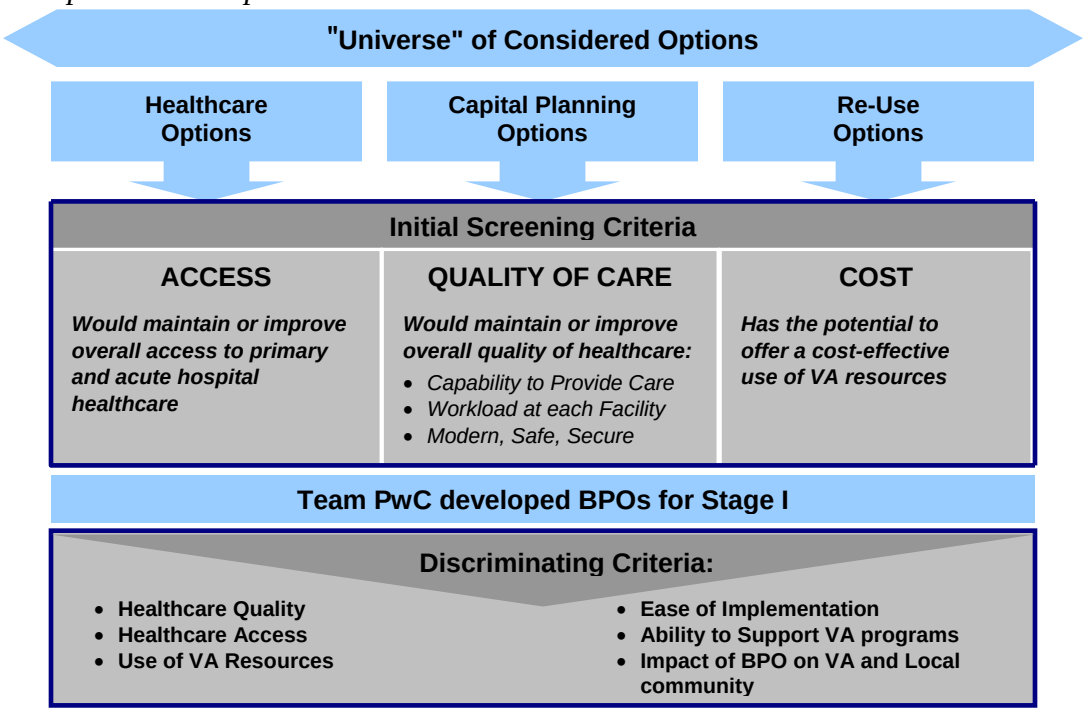
5.0 Business Plan Option Development Approach

Options Development Process

Using VA furnished information, site tours and interviews, as well as stakeholder and LAP member input, Team PwC developed a broad range of discrete and credible healthcare and capital planning options and associated re-use options. Each healthcare and capital planning option that passed the initial screening served as potential components of BPOs. A review panel of experienced Team PwC consultants, including medical practitioners, capital planners, and real estate advisors considered the assessment results and recommended the BPOs. Each of the BPOs was then assessed at a more detailed level according to a set of discriminating criteria.

The following diagram illustrates the complete options development process:

Figure 4: Options Development Process



Initial Screening Criteria

Discrete healthcare, and capital options were developed for the Louisville VAMC and were subsequently screened to determine whether or not a particular option had the potential to meet

or exceed the CARES objectives. The following describes the initial screening criteria that were used during this process:

- **Access**: *Would maintain or improve overall access to primary and acute hospital healthcare* – During Stage I, primary care access is evaluated using VA's Primary Care Access Tool and a base year of 2001. If an option resulted in a change in location for primary care, the new location would be evaluated using the Primary Care Access Tool. Acute Care access was evaluated using data provided by VA using its ArcView Tool to recalculate the new location's impact on access.

- **Quality of Care:** *Would maintain or improve the overall quality[11] of healthcare* – This is assessed by consideration of the site's ability to provide services and the level of workload at any facility compared to utilization thresholds. Quality concerns may also occur if it is assumed that VA would contract with a non-VA provider for specific services but there is no current proven healthcare provider for those required services within that particular location. In such a case, assumptions may be required regarding the likelihood of such a provider emerging. Therefore, any option that relied upon patient care being provided by an emergent third party failed this quality test. An option would pass the quality test only in cases when a compelling reason could be identified to assert that services would be provided.

  Additionally, the following was included as part of the quality measure:

  - **Modern, Safe, Secure**: *Would result in a modernized, safe healthcare delivery environment that is compliant with existing laws, regulations, and VA requirements* – This was assessed by consideration of the physical environment proposed in the option and any material weaknesses identified in VA's space and functional surveys, facilities' condition assessments, and seismic assessments for existing facilities, and application of a similar process to any alternative facilities proposed.

  It should be noted that the disruption to continuity of care is not an explicit criteria utilized in the initial screening process; however, the impact on continuity of care was used to further narrow the broad range of options to be assessed in Stage I. A separate study of the impact on continuity of care for each of the options will be conducted in the Stage II assessments of the options.

- **Cost**: *Has the potential to offer a cost-effective use of VA resources* – This was assessed as part of Team PwC's initial cost effectiveness analysis. A 30-year planning period was used in the cost effectiveness analysis. Any option that did not have the potential to provide a cost effective physical and operational configuration of VA resources as compared to the baseline[12] failed this test.

[11] Quality includes clinical proficiency across the spectrum of care, safe environment, and appropriate facilities.

[12] Baseline describes the current state applying utilization projected out to 2023, without any changes to facilities, programs, or locations. Baseline assumes same or better quality, and accounts for any necessary maintenance for a modern, safe, and secure healthcare environment.

All identified options were screened against these criteria. If an option failed the initial access test, then no other tests were applied. Those passing the access test were then further screened against quality and cost. Screening was halted when the option failed to meet one of the initial screening criteria.

Discriminating Criteria

After passing the initial screening, BPOs were developed and the following discriminating criteria were applied to assess the overall attractiveness of the BPO.

- **Healthcare Quality** – These criteria assess the following:
    - How the BPO sustains or enhances the quality of healthcare delivery.
    - If the BPO can ensure that forecasted healthcare need is appropriately met.
    - Whether each BPO will result in a modernized, safe, and secure healthcare delivery environment.

- **Healthcare Access** – These criteria assess how the BPO impacts the percentage of the patients meeting access guidelines by describing the current percentage and the expected percentage of patients meeting this guideline.

- **Impact on VA and Local Community** – These criteria assess the impact on staffing, as well as research and clinical education programs.

- **Use of VA Resources** – These criteria assess the cost effectiveness of the physical and operational configuration of the BPO over a 30-year planning horizon. Costs were assessed at an "order of magnitude" level of analysis in Stage I. Detailed costing will be conducted in Stage II. These criteria include:
    - Operating Cost Effectiveness: The ability of the BPO to provide recurring/operating cost increases or savings as compared to the baseline.
    - Level of Capital Expenditures: The amount of investment required relevant to the baseline based on results of initial capital planning estimates.
    - Level of Re-use Proceeds: The amount of re-use proceeds and/or demolition/clean-up cost based on results of the initial re-use study.
    - Cost Avoidance: The ability to obtain savings in necessary capital investment as compared to the baseline BPO.
    - Overall Cost Effectiveness: The initial estimate of net present cost as compared to the baseline.

- **Ease of Implementation** – These criteria assess the risk of implementation associated with each BPO. The following major risk areas were considered:

- Reputation
- Continuity of Care
- Organization & Change
- Legal & Contractual
- Compliance
- Security
- Political
- Infrastructure
- Financial
- Technology
- Project Realization

- **Ability to Support VA programs** – These criteria assess how the BPO would impact the sharing of resources with DoD, enhance One-VA integration, and impact special considerations, such as DoD contingency planning, Homeland Security needs, or emergency need projections.

Operational Costs

The objective of the cost analysis in Stage I is to support the comparison of the estimated cost effectiveness of the baseline with each BPO. The Study Methodology calls for an "order of magnitude" level of analysis in Stage I and detailed costing in Stage II. The total estimated costs include operating costs, initial capital costs, re-use opportunities, and any cost avoidances. The operating costs for the baseline and each BPO are a key input to the financial analysis for Stage II. Operating costs considered for the Stage I analysis include direct medical care, administrative support, engineering and environmental management, and miscellaneous benefits and services.

The baseline operating costs were provided to Team PwC by VA. The 2004 costs were obtained from the Decision Support System (DSS), VA's official cost accounting system. This information was selected for use because DSS provides the best available data for identifying fixed direct, fixed indirect, and variable costs. The data can be rolled up to the CIC level and the data is available nationally for all VAMCs and CBOCs. These costs are directly attributable costs and generally do not reflect the total costs of the operation.

The costs were obtained for each facility within the study scope and were aggregated into the CICs. The costs were categorized as total variable (per unit of care), total fixed direct, and total fixed indirect costs. The definition of each cost category is as follows:

- Total Variable (Direct) Cost: The costs of direct patient care that vary directly and proportionately with fluctuations in workload. Examples include salaries of providers and the cost of medical supplies. Variable direct cost = variable supply cost + variable labor cost. The cost of purchased care is considered a variable direct cost.

- Total Fixed Direct Cost: The costs of direct patient care that do not vary in direct proportion to the volume of patient activity. The word "fixed" does not mean that the costs do not fluctuate, but rather that they do not fluctuate in direct response to workload changes. Examples include depreciation of medical equipment and salaries of administrative positions in clinical areas.

- Total Fixed Indirect Cost: The costs not directly related to patient care, and, therefore, not specifically identified with an individual patient or group of patients. These costs are

an allocation of the total other costs (i.e. not direct costs) associated with the operation of the facility. These costs are allocated to individual medical departments through VA's existing indirect cost allocation process. Examples of indirect costs include utilities, maintenance, and administration costs.

FY 2004 operating costs from DSS were deflated to FY 2003 dollars to create the costs for FY 2003 which is the base date for current cost comparison. These costs (fixed and variable) were then inflated for each year of the study period. Variable costs were multiplied by the forecasted workload for each CIC and summed to estimate total variable costs. Variable costs were also provided by VA for non-VA care. These are based on VA's actual expenses and are used in the BPOs where care is contracted.

These costs are used together with initial capital investment estimates as the basis for both the baseline option and each BPO with adjustments made to reflect the impact of implementation of the capital option being considered. Potential re-use proceeds are added to provide an overall indication of the cost of each BPO.

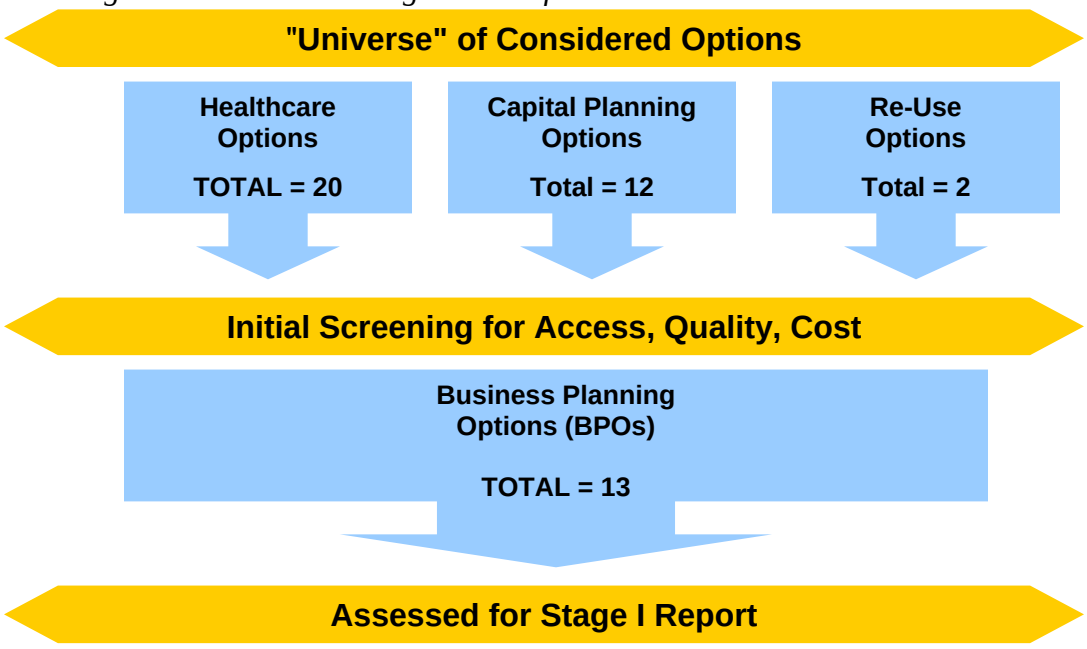
Summary of Business Plan Options

The individual healthcare, capital planning, and re-use options that passed the initial screening were further considered as options to comprise a BPO. A BPO is defined as consisting of a single healthcare option, combined with at least one associated capital planning option and re-use option. Therefore, the formula for a BPO is:

BPO = Healthcare option + Capital Planning option + Re-use option(s)

The following diagram illustrates the final screening results of all alternate options given consideration (the universe of considered options are not additive):

Figure 5: Final Screening Results of Alternate BPOs



Options Not Selected for Assessment

Several of the options created during the option development process did not pass the initial screening criteria. Table 10 lists those options that either did not pass the initial screening criteria or were deemed inferior to other options that did pass the initial screening. The table details the results of the initial screening and the reasons why these options were not selected. Healthcare options not selected are counted once, even though they may have been able to be combined with multiple capital planning options.

Table 10: Options Not Selected for Assessment

Label	Description	Reason(s) Not Selected
Segregate Specialty Outpatient from Inpatient		
Development of options that segregate specialty outpatient care service from inpatient	Creation of separate locations to provide specialty ambulatory care from inpatient care, particularly in a new hospital or a hospital with the University of Louisville	Failed cost. The operational configuration would not be cost-effective.
Referral Center		
Creation of a referral center for specific clinical programs for the VISN	Creation of a referral center to provide clinical care by meeting Louisville demand and capturing demand from other VA markets	Failed quality and cost. VA analysis of patient origin for specific clinical care requirements does not support establishing a referral center.
Research		
Move research to off-hospital location	Move two floors of research occurring in the hospital building to an off-site building	Failed cost. The operational configuration would not be cost-effective.
Logistical Support		
Maintaining logistical support buildings (i.e. laundry, etc.)	Create options that discontinue services that can be contracted	Failed cost. Cost required to maintain physical plan are not an effective use of resources.
Partial Re-use		
Re-use of a limited amount of land at the current site	Several options provide parcels of land from five to seven acres at current site	Failed quality. Will not result in a modern, safe, and secure environment based on access to the site for security and emergency purposes.
Contracting		
Contract out to community providers and close facility	Create multiple contracts for care	Failed quality. Uncertainty that non-VA providers could support all required services.
Inpatient and Specialty Replacement at Current Location		
Build inpatient and specialty ambulatory replacement hospital at current site. Build primary care CBOC	Build replacement hospital at current site for inpatient and specialty care and build primary care CBOC in a different location.	Failed cost. The operational configuration would not be cost-effective.
Renovate with addition at Current Site		
Renovate with addition at current site without collocating VBA	Surplus of non-clinical space at current site	Failed cost. The operational configuration would not be cost-effective.

Baseline BPO

Based upon Team PwC's methodology, the baseline BPO advances in the Stage I process. The baseline is the BPO under which there would not be significant change in either the location or type of services provided in the study site. In the baseline BPO, the Secretary's Decision and forecasted healthcare demand and trends from the demand forecast for 2023 are applied to the current healthcare provision solution for the study site. Additionally, capital improvements required to meet modern, safe, and secure standards are factored into the current state assessment to develop this BPO.

Specifically, the baseline BPO is characterized by the following:

- Healthcare continues to be provided as currently delivered, except to the extent that healthcare volume for particular procedures fall below key quality or cost effectiveness threshold levels.
- Capital costs allow for current facilities to receive such investment as is required to rectify any material deficiencies (e.g., in safety or security) such that they would provide a safe healthcare delivery environment as required in the Secretary's Decision.
- Life cycle capital costs allow for ongoing preventative maintenance and life-cycle maintenance of major and minor building elements.
- Re-use plans use such vacant space in buildings and/or vacant land or buildings emerge as a result of the changes in demand for services and the facilities in which they sit.

Evaluation System for BPOs

Each BPO is evaluated against the baseline BPO in an assessment table providing comparative rankings across several categories and an overall attractiveness rating. The results of the BPO assessment and the Team PwC recommendation are provided in subsequent sections.

Table 11: Evaluation System Used to Compare BPOs to baseline BPO

Ratings to assess Access, Quality, Local Community, and Ability to Support VA Programs	
↑	The BPO has the potential to provide a slightly improved state compared to the baseline BPO for the specific discriminating criteria (e.g., access, quality, etc)
↔	The BPO has the potential to provide materially the same state as the baseline BPO for the specific discriminating criteria (e.g., access, quality, etc)
↓	The BPO has the potential to provide a slightly lower or reduced state compared to the baseline BPO for the specific discriminating criteria (e.g., access, quality, etc).
Operating cost effectiveness (based on results of initial healthcare/operating costs)	
↑↑↑	The BPO has the potential to provide significant recurring operating cost savings compared to the baseline BPO (>15%)
↑↑	The BPO has the potential to provide significant recurring operating cost savings compared to the baseline BPO (>10%)
↑	The BPO has the potential to provide some recurring operating cost savings compared to the baseline BPO (5%)
-	The BPO has the potential to require materially the same operating costs as the baseline BPO (+/- 5%)

↓	The BPO has the potential to require slightly higher operating costs compared to the baseline BPO (>5%)
↓↓	The BPO has the potential to require slightly higher operating costs compared to the baseline BPO (>10%)
↓↓↓	The BPO has the potential to require slightly higher operating costs compared to the baseline BPO (>15%)
Level of capital expenditures estimated	
↓↓↓↓	Very significant investment required compared to the baseline BPO **(≥ 200%)**
↓↓	Significant investment required compared to the baseline BPO **(121% to 199%)**
-	Similar level of investment required compared to the baseline BPO **(80% to 120% of Baseline)**
↑↑	Reduced level of investment required compared to the baseline BPO **(40%-80%)**
↑↑↑↑	Almost no investment required **(≤ 39%)**
Level of re-use proceeds relative to baseline BPO (based on results of initial re-use study)	
↓↓	High demolition/clean-up costs, with little return anticipated from re-use
-	No material re-use proceeds available
↑	Similar level of re-use proceeds compared to the baseline (+/- 20% of baseline)
↑↑	Higher level of re-use proceeds compared to the baseline (e.g., 1-2 times)
↑↑↑	Significantly higher level of re-use proceeds compared to the baseline (e.g., 2 or more times)
Cost avoidance (based on comparison to baseline BPO)	
-	No cost avoidance opportunity
↑↑	Significant savings in necessary capital investment compared to the baseline BPO
↑↑↑↑	Very significant savings in essential capital investment compared the baseline BPO
Overall cost effectiveness (based on initial net present cost calculations)	
↓↓↓↓	Very significantly higher net present cost compared to the baseline BPO (>1.15 times)
↓↓	Significantly higher net present cost compared to the baseline BPO (1.10 – 1.15 times)
↓	Higher net present cost compared to the baseline BPO (1.05 – 1.09 times)
-	Similar level of net present cost compared to the baseline (+/- 5% of baseline)
↑	Lower net present cost compared to the baseline (90-95% of Baseline)
↑↑	Significantly lower net present cost compared to the baseline BPO (85-90% of baseline)
↑↑↑↑	Very significantly lower net present cost compared to the baseline BPO (<85% of baseline)
Ease of Implementation of the BPO	
↑	The BPO has the potential to provide a slightly improved state compared to the baseline BPO based upon the level of impact and likelihood of occurrence of risks to its implementation plan.
↔	The BPO has the potential to provide materially the state of the baseline based upon the level of impact and likelihood of occurrence of risks to its implementation plan.
↓	The BPO has the potential to provide a slightly lower or reduced state compared to the baseline BPO based upon the level of impact and likelihood of occurrence of risks to its implementation plan.
Overall "Attractiveness" of the BPO Compared to the baseline	
↑↑↑↑	Very "attractive" – highly likely to offer a solution that improves quality and/or access compared to the baseline while appearing significantly more cost effective compared to the baseline.
↑↑	"Attractive" - likely to offer a solution that at least maintains quality and access compared to the baseline while appearing more cost effective compared to the baseline.
-	Generally similar to the baseline.

↓↓	Less "attractive" compared to the baseline - likely to offer a solution that while maintaining quality and access compared to the baseline appears less cost effective compared to the baseline.
↓↓↓↓	Significantly less "attractive" – highly likely to offer a solution that may adversely impact quality and access compared to the baseline and appearing less (or much less) cost effective compared to the baseline.

Stakeholder Input: Purpose and Methods

VA determined at the beginning of the CARES process that it would use the Federal Advisory Committee Act (FACA) process to solicit stakeholder input and to provide a public forum for discussion of stakeholder concerns because "[t]he gathering and consideration of stakeholder input in this scope of work is of great importance." According to the Statement of Work, the purpose of the Local Advisory Panel (LAP) appointed under the FACA is to

> provide the Contractor with a perspective on previous CARES local planning products, facility mission and workload, facility clinical issues, environmental factors, VISN referral and cross cutting issues in order to assist the Contractor in the refinement of the options the Contractor shall recommend. The Federal Advisory Committee will also provide feedback to the Contractor on proposed options and recommendations.

The Local Advisory Panel is required to hold at least four public meetings at which stakeholders would have an opportunity to present testimony and comment on the work performed by Team PwC and the deliberations of the LAP.

Team PwC also devised methods for stakeholders to communicate their views without presenting testimony at the LAP meetings. Throughout Stage I, a comment form was available electronically via the CARES website and in paper form at the first LAP public meeting. In addition, stakeholders were advised that they could submit any written comments or proposals to a central mailing address, and a number of stakeholders used this method as well.

The time in which stakeholder input was collected during Stage I can be divided into two input periods – Input Period One and Input Period Two. The intent of Input Period One was to collect general stakeholder input to assist in the development of potential BPOs, while Input Period Two allowed stakeholders to comment on the specific BPOs presented at the public LAP meeting. Input Period One started in April 2005 and ended on the day that the comment form with specific BPOs was available for public comment on the CARES website. For both periods, stakeholder input was reviewed and categorized into nine categories of concern which are summarized in Table 12.

For Input Period Two, stakeholders were provided with a brief description of the BPOs and asked to indicate whether they favored the option, were neutral about the option, or did not favor the option. Ten days after the second LAP meeting was held, Team PwC summarized all of the stakeholder views that were received during Input Period Two (Input Period One had been previously summarized), and this information is included in this report.

Table 12: Definitions of Categories of Stakeholder Concern

Stakeholder Concern	*Definition*
Effect on Access	Involves a concern about traveling to another facility or the location of the present facility.
Maintain Current Service/Facility	General comments related to keeping the facility open and maintaining services at the current site.
Support for Veterans	Concerns about the federal government/VA's obligation to provide health care to current and future veterans.
Effect on Healthcare Services & Providers	Concerns about changing services or providers at a site.
Effect on Local Economy	Concerns about loss of jobs or local economic effects of change.
Use of Facility	Concerns or suggestions related to the use of the land or facility.
Effect on Research & Education	Concerns about the impact a change would have on research or education programs at the facility.
Administration's Budget or Policies	Concerns about the effects of the administration's budget or other policies on health care for veterans.
Unrelated to the Study Objectives	Other comments or concerns that are not specifically related to the study.

Summarized stakeholder views were available to LAP members for their review and consideration when evaluating BPOs as well as in defining new BPOs.

Stakeholder Input to Business Plan Option Development

Approximately 25 members of the public attended the first LAP meeting held on April 29, 2005. Approximately 40-50 members of the public attended the second LAP meeting held on October 4, 2005. A total of 55 forms of stakeholder input (general comments on the study as well as specific BPOs) were received between April 20 and October 14, 2005. The concerns of stakeholders who submitted general comments not related to specific BPOs are summarized in Table 13.

Table 13: Analysis of General Stakeholder Concerns (Periods One and Two)

Key Concern	Number of Comments		
	Oral	Written and Electronic	**Total**
Effect on Access	6	4	**10**
Maintain Current Service/ Facility	3	2	**5**
Support for Veterans	2	4	**6**
Effect on Healthcare Services and Providers	1	2	**3**
Effect on Local Economy	0	5	**5**
Use of Facility	11	9	**20**
Effect on Research and Education	1	0	**1**
Administration's Budget or Policies	0	4	**4**
Unrelated to the Study Objectives	4	1	**5**

6.0 Business Plan Options

The option development process resulted in a multitude of discrete healthcare and capital options which were subsequently screened to determine whether a particular option had the potential to meet or exceed the CARES objectives (i.e., access, quality, and cost). Overall, there were 12 BPOs in addition to the baseline BPO (comprising healthcare, capital, and re-use components) which passed initial screening and were developed for Stage I (see Figure 5).

Each BPO was assessed at a more detailed level according to the discriminating criteria. The BPOs reflect proposals calling for renovation and an addition to the hospital at the current site, or building a replacement hospital at the current site, or at a site near or on the campus of the University of Louisville (U of L) Medical Center. Several BPOs would accommodate collocation of the VBA regional office on the current site or at a site near the University of Louisville. In addition, several BPOs propose the establishment of an additional off-site CBOC in an effort to improve veterans' access to primary care.

One additional BPO (BPO 14) was proposed by the LAP at the second LAP Public Meeting. Under this BPO, a new facility for inpatient and specialty care (including women's health) in the vicinity of the University of Louisville and a new ambulatory care unit at the current site would be constructed. The types of healthcare services currently provided by the Louisville VAMC would be expanded to include nursing home, domiciliary, and homeless transitional services, and these would also be housed at the current site.

There was another BPO proposed by one member of the LAP. However, it did not receive the required support of a second LAP member and, therefore, never came to a vote. This BPO proposed constructing a new hospital at the current site with a new addition and parking garage, while renovating Building 1 for long term care, domiciliary, homeless transition services (male and female), and other veterans services.

Table14: Business Plan Options

BPO 1: Baseline
Current state projected out to 2013 and 2023 without any changes to facilities or programs, but accounting for projected utilization changes, and assuming same or better quality, and necessary maintenance for a safe, secure, and modern healthcare environment. Renovate the existing main hospital building (Building 1). All other services and buildings will remain in their present location with maintenance and systems replacement per the schedule defined in the CAI database. VBA does not collocate to the campus due to space and parking limitations, although collocation is deemed advantageous. There is no re-use potential with this BPO.
BPO 2: Construct Replacement Hospital at Zorn Avenue (Current Site) with VBA
A new hospital and parking structure will be constructed north of the existing Building 1, relocating existing logistics into a new building and collocating with VBA on the current campus. In addition, the laundry services will be contracted and the existing laundry building demolished. There is no re-use potential with this BPO.

BPO 3: Construct Replacement Hospital at Current Site Without VBA
A new hospital and parking structure will be constructed north of the existing Building 1, relocating existing logistics into a new building. In addition, the laundry services will be contracted and the existing laundry building demolished. There is no re-use potential with this BPO.
BPO 4: Renovate Facility with Addition; Collocate VBA
Construct a new addition to Building 1 and adjacent parking structure to accommodate clinical care and diagnostic and treatment functions. Renovate a portion of the existing facility to accommodate support and administrative functions. Collocate VBA in renovated Building 1 space. Vacate and mothball portions of existing Building 1 that are not needed for projected workload volume. House logistical functions in new construction. There is no re-use potential with this BPO.
BPO 5: Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish **new CBOC Off-Site; Collocate VBA.**
Construct a new addition to Building 1 and adjacent parking structure to accommodate a limited amount of primary care, all inpatient and specialty outpatient clinical care, and diagnostic and treatment functions. Renovate a portion of the existing facility to accommodate support and administrative functions. Establish a new CBOC off-site that improves the facility's ability to meet primary care access guidelines. Collocate VBA. There is no re-use potential with this BPO.
BPO 6: Collocate Replacement Hospital on Campus of University of Louisville
Provide all inpatient and outpatient care in a new hospital collocated on the campus of the University of Louisville Medical Center which has some available land. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 7: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Establish New CBOC Off-Site
Provide all inpatient and specialty and limited primary outpatient care in a new hospital collocated on the campus of the University of Louisville Medical Center which has some available land. Build a new parking structure. To assist with access and respond to veterans' concerns regarding parking, establish a new primary care CBOC off-site that improves the facility's ability to meet primary care access guidelines. This will also minimize the demand for clinical and parking space on the campus of the University. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 8: Collocate Replacement Hospital on Campus of University of Louisville. Share Ancillary Services With University of Louisville
Provide all inpatient and outpatient care in a new hospital collocated on the campus of the University of Louisville Medical Center which has some available land. Build a new parking structure. To minimize capital costs and develop a sharing environment with its local hospitals, create a sharing agreement with neighboring hospitals to contract and /or share ancillary and support services, including high cost technology that generally has an increasingly shortened life cycle. This will also minimize the demand for clinical and parking space on the Campus of the University. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 9: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site
Provide all inpatient and specialty and limited primary outpatient care in a new hospital collocated on the campus of the University of Louisville Medical Center which has some available land. Build a new parking structure. To minimize capital costs and develop a sharing environment with its local hospitals, create a sharing agreement with neighboring hospitals to contract and /or share ancillary and support services, including high cost technology that generally has an increasingly shortened life cycle. Establish a new CBOC off-site that improves the facility's ability to meet the primary care access guidelines. This will also minimize the demand for clinical and parking space on the Campus of the University. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.

BPO 10: Construct Replacement Hospital Near University of Louisville. Collocate VBA
Provide all inpatient and outpatient care in a new hospital located near the campus of the University of Louisville Medical Center. Collocate VBA. Build a new parking structure or surface parking lot. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 11: Construct Replacement Hospital Near University of Louisville
Provide all inpatient and outpatient care in a new hospital located near the campus of the University of Louisville Medical Center, but do not collocate VBA. Build a new parking structure or surface parking lot. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 12: Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site. Collocate VBA
Provide all inpatient and specialty and limited primary outpatient care in a new hospital located near the campus of the University of Louisville Medical Center. Establish a new CBOC off-campus that improves the facility's ability to meet the primary care access guidelines. Collocate VBA. This will also minimize the demand for clinical and parking space in downtown Louisville. Build a new parking structure or surface parking lot. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 13: Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site
Provide all inpatient and specialty and limited primary outpatient care in a new hospital located near the campus of the University of Louisville Medical Center. Establish a new CBOC off-campus that improves the facility's ability to meet the primary care access guidelines. Build a new parking structure or surface parking lot. This will also minimize the demand for clinical and parking space in downtown Louisville. Full re-use of the site for residential use (condominiums or apartments) is associated with this BPO.
BPO 14: Construct New Inpatient Facility Near University of Louisville. Construct New Outpatient, Domiciliary, and Nursing Home on Current Site; Collocate VBA
Similar to BPO 12 in terms of scale of new hospital near University of Louisville. Would establish new nursing home and domiciliary services in either renovated or new space, and construct a new CBOC on the current site. VBA would also be accommodated in either renovated or new space on the current site.

Assessment Drivers

Over the next 20 years, the number of enrolled veterans for this market is expected to decline 16% from 118,000 to approximately 98,000. However, enrollment of Priority 1-6 veterans is projected to increase through 2013 and then decline to current levels (approximately 84,000) by 2023. The Louisville VAMC has an inpatient bed need of 93 beds in 2003, increasing to a bed need of 151 in 2013, then decreasing to a bed need of 138 in 2023. Specifically with regard to inpatient care:

- Both medicine/observation and surgery demand increases through 2013 and declines modestly by 2023, but remains above 2003 levels.
- Psychiatry and substance abuse demand increases from 16 beds in 2003 to 44 beds by 2023.

With respect to ambulatory care, projected demand for six of the eight CICs shows an increasing or level trend between 2003 and 2023, while projected demand for two CICs declines. Overall, projected ambulatory clinic stops increase 15% over this 20-year period. Demand for primary care and related specialties shows a significant growth between 2003 and 2013, followed by a projected decrease between 2013 and 2023, but remains higher than in 2003. Demand for

behavioral and other mental health services continues to increase throughout the period, going from approximately 28,000 clinic stops in 2003 to over 39,000 in 2023.

These long term healthcare trends for the Louisville facility together with major drivers were considered for the Louisville study site. These drivers represent factors particularly noticeable at the Louisville VAMC that must be balanced in the development and evaluation of business plan options. They are:

1). The facility will require significant investment of capital to accommodate future demand, lacks the operating efficiency of a new facility, and will not meet the space requirements for the 2023 demand.
2). The University of Louisville is a valued affiliate in meeting the healthcare needs of veterans who use the Louisville VAMC and CBOCs. Significant teaching and research programs exist and offer significant benefit to the VAMC and community.
3). While there are re-use opportunities for the existing campus, the expected return from its re-use would only provide a moderate offset at best to the cost of renovated or new facilities at this medical center.
4). VBA would like to collocate its Louisville Regional Office at the Louisville VAMC, but there is currently insufficient space in the existing buildings to accommodate this collocation. Also, there is a very active sharing agreement between the Louisville VAMC and the Ireland Army Hospital at Fort Knox, KY.

These four drivers are described further below.

Healthcare Quality – The main hospital building is well maintained but has significant fire and life safety issues regarding the location of stairways and fire ratings of chases. In 1993, JCAHO noted actions that had been take to protect patient safety, but required that any further renovations to the building also deal with these life safety issues. Floor to floor heights in the main building meet 1950's standards but are minimal for today's standards. These structural issues make it very difficult to create a safe, modern, and secure environment.

Because the overall demand for space exceeds the building's capacity, leased space was obtained to provide behavioral health services. In addition, approximately 17-19% of workload for eye clinic, non-surgical specialties, surgical and related specialties, and urology is currently contracted out to providers by the Louisville VAMC. A lack of clinical space is one of the reasons for the services being contracted out. Because projected demand for many services is expected to be higher in 2023 than it is today, there is a need for additional space at this facility. The projected space need for 2023 is 656,000 square feet, which is approximately 87,000 square feet more than is available currently at this facility (this includes about 4,000 square feet of leased space).

Impact on VA and Local Community – Over 400 medical residents receive training at the Louisville VAMC each year. The VAMC has a primary affiliation with the University of Louisville's School of Medicine, which has active residency programs in all major medical specialties and subspecialties, in addition to a residency in primary care. More than 200 medical students and over 400 allied health trainees receive training at the Louisville VAMC each year. The University of Louisville is both a major academic and research affiliate. The University of

Louisville is currently five miles from the VAMC. Although the Louisville VAMC reportedly has no special difficulty in recruiting staff, it is difficult to envision how the breadth of services currently provided to veterans and active-duty members and their families could be maintained without the strong affiliation which the Louisville VAMC enjoys with the University of Louisville Medical Center. The potential to relocate the medical center to a site near or on the campus of this medical center presents an opportunity to strengthen the education and academic affiliations between VA and the University.

Re-Use Potential – Although the current Louisville VAMC location appears to be popular with the current veterans that use the facility, the site has potential value for re-use or redevelopment if the VAMC moved to another location. The steep topography and limited entry access, however, makes a significant part of the 47-acre site very difficult to develop. Overall, if an option is chosen that would result in closure of all VA facilities on this site and a developer could be found who was willing to pay its maximum realizable value, the cost of building replacement facilities at another location is likely to far exceed the amount realized from re-use or sale of this site. Thus, despite its potential value, the likely proceeds from re-use are not a major driver in deciding the best BPOs to study further.

Ability to Support VA Programs - There is a very strong sharing agreement with the Ireland Army Hospital at Fort Knox, KY, and the trend is that the Louisville VAMC is providing more care to these beneficiaries. In addition, services to veterans would improve if the Louisville VBA regional office, which currently occupies approximately 60,000 square feet in another part of Louisville, were collocated with the VAMC. Given the current and projected clinical space deficit, there are serious obstacles to accommodating further services to Department of Defense (DoD) beneficiaries at the current facility or providing space to VBA.

Assessment Results

The following section summarizes the results of applying discriminating criteria to each BPO and comparing them to the baseline in accordance with the Evaluation System for BPOs (Table 11). Subsequent sections describe the reactions of the Local Advisory Panel and Stakeholders to these BPOs, Team PwC's screening assessment of LAP BPOs, and Team PwC's overall recommendations for each BPO. With all of the BPOs having the same overall attractiveness assessment, additional specific criteria reduced the number or recommended BPOs. These are discussed in the section entitled "BPO Recommendations for Assessment in Stage II".

Table 15: Baseline Assessment

Assessment of Baseline	Description
Healthcare Access	
Primary	62% of enrollees are within the drive time guidelines. The primary care access threshold is 70%. Therefore, Louisville does not meet the drive time access guideline for primary care.
Acute	83% of enrollees are within the drive time guidelines. The acute care access threshold is 65%. Therefore Louisville meets the drive time access guideline for acute care.

Assessment of Baseline	Description
Tertiary	100% of enrollees are within the drive time guideline. The tertiary care threshold is 65%. Therefore, Louisville meets the access guideline for tertiary care.
Healthcare Quality	
Quality of medical services	According to 2004 data, the Louisville VAMC achieved higher selected quality scores for ambulatory care and patient satisfaction (ambulatory care) as compared to the VISN and overall national scores. The Louisville VAMC achieved the same or lower quality measures for inpatient patient satisfaction, selected behavioral health services, and selected inpatient care services.
Modern, safe, and secure environment	With significant renovation, the baseline conforms to current industry standards and code requirements for healthcare environments, and allows exception for non-hazardous existing conditions which were code compliant at the time of their construction
Ensures forecast healthcare need is appropriately met	Assumes that in order to maintain quality of care and meet VA thresholds for clinical volume, VA will make necessary operational adjustments (e.g. staffing or contract arrangements).
Impact on VA and Local Community	
Human Resources: FTEE need (based on volume)	With the projected increase in utilization, FTEE levels would increase to the extent services are not contracted out.
Recruitment / retention	Louisville VAMC is reported to be a competitive employer in the marketplace and does not face recruitment and retention challenges. This environment is expected to be maintained in the baseline.
Research	The current program focuses mainly in the areas of cancer and cardiovascular research in collaboration with the University of Louisville. The annual funding level is estimated at $2.5 million
Education and Academic Affiliations	Affiliations exist with the University of Louisville and numerous other allied health schools. Over 400 medical residents, 200 medical students, and more than 400 allied health trainees receive training annually.
Use of VA Resources	
Operating cost effectiveness	Louisville VAMC operating costs include those costs associated with providing care onsite at the Louisville facility, as well as purchasing care for the following CICs: eye clinic, non-surgical specialties, surgical and related specialties, and urology services provided by local community providers. Renovations and increased demand would require contracting out of services and, therefore, higher operating costs. Therefore, the baseline operating cost effectiveness is expected to be higher than the current operating cost effectiveness.
Level of capital expenditures estimated	Level of capital expenditures estimated includes the costs identified by the facility and captured in the CAI database reflecting essential maintenance and capital required to achieve a modern, safe, and secure environment.
Level of re-use proceeds	Not applicable for the baseline.

Assessment of Baseline	Description
Cost avoidance	In the baseline, it is assumed that the amount of money identified by the facility in the CAI database as essential maintenance would be fully expended.
Overall cost effectiveness	Not applicable for the baseline.
Ease of Implementation Riskiness of BPO Implementation	The baseline option presents implementation risk in terms of the following major risk areas: • Continuity of Care - Significant renovations may disrupt provision of care to patients and further exacerbate space shortage; • Infrastructure - Any significant renovation would entail addressing dead-end corridor issues, and could entail addressing significant environmental issues. The baseline does not provide any future flexibility for increased demand or accommodate unanticipated future demand or changes in healthcare practices or technology. • Project Realization - The expected complexity of renovating current facilities while continuing to provide patient care could result in delays, the need for additional resources, and transition complications.
Ability to Support VA Programs	
DoD sharing	The Louisville VAMC operates a clinic at the Ireland Army Hospital at Fort Knox, Kentucky and one at the Louisville National Guard complex for TRICARE beneficiaries. The Louisville VAMC also has numerous sharing agreements with the Ireland Army Community Hospital at Fort Knox. An inpatient agreement is in place for psychiatry, medical, surgical, neurological, and sleep studies. The baseline supports these current sharing arrangements.
One-VA Integration	There is a VBA regional office located in downtown Louisville.
Special Considerations	No special considerations are noted.

Table 16 provides an overall summary of the BPOs assessed for comparative purposes.

Table 16: BPO Assessment Summary[13]

Assessment Summary	BPO 2	BPO 3	BPO 4	BPO 5	BPO 6	BPO 7
	Construct Replacement Hospital at Zorn Avenue (Current Site) with VBA	Construct Replacement Hospital at Current Site without VBA	Renovate Facility with Addition; Collocate VBA	Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA	Collocate Replacement Hospital on Campus of University of Louisville	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville; Establish CBOC off-site
Healthcare Access						
Primary care	↔	↔	↔	↑	↔	↑
Acute care	↔	↔	↔	↔	↔	↔
Tertiary care	↔	↔	↔	↔	↔	↔
Healthcare Quality						
Quality of medical services	↔	↔	↔	↔	↔	↔
Modern, safe, and secure environment	↑	↑	↑	↑	↑	↑
Ensures forecast healthcare need is appropriately met	↔	↔	↔	↔	↔	↔
Impact on Local Community						
Human Resources:						
FTEE need (based on volume)	Increase	Increase	Increase	Increase	Increase	Increase
Recruitment / retention	↑	↑	↑	↑	↔	↔
Research	↑	↑	↑	↑	↑	↑
Education and Academic Affiliations	↑	↑	↑	↑	↑	↑
Use of VA Resources						
Operating cost effectiveness	-	-	-	-	-	-
Level of capital expenditures estimated	↓↓	-	↓↓	↓↓	-	-
Level of re-use proceeds	-	-	-	-	↑↑↑	↑↑↑
Cost avoidance opportunities	-	-	-	-	-	-

[13] BPO 14 is not included in the Assessment Summary Table. It was created during the second LAP meeting at the suggestion of the LAP and, therefore, only the initial screening criteria of access, quality, and cost were applied to determine if the BPO has the potential to meet or exceed the CARES objectives. If BPO 14 is selected for Stage II, a more detailed analysis will be completed.

Assessment Summary	BPO 2	BPO 3	BPO 4	BPO 5	BPO 6	BPO 7
	Construct Replacement Hospital at Zorn Avenue (Current Site) with VBA	Construct Replacement Hospital at Current Site without VBA	Renovate Facility with Addition; Collocate VBA	Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA	Collocate Replacement Hospital on Campus of University of Louisville	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville; Establish CBOC off-site
Overall cost effectiveness	-	-	-	-	-	-
Ease of Implementation						
Riskiness of BPO implementation	↑	↑	↔	↔	↓	↓
Ability to Support VA Programs						
DoD sharing	↔	↔	↔	↔	↔	↔
One-VA Integration	↑	↔	↑	↑	↔	↔
Special Considerations	↔	↔	↔	↔	↔	↔
Overall Attractiveness	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑

Assessment Summary	BPO 8	BPO 9	BPO 10	BPO 11	BPO 12	BPO 13
	Collocate Replacement Hospital on Campus of University of Louisville; Share Ancillary Services with University of Louisville	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site	Construct Replacement Hospital near University of Louisville; Collocate VBA	Construction Replacement Hospital Near University of Louisville	Construct Replacement Hospital near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care e. Establish CBOC Off-Site. Collocate VBA	Construct New Inpatient Facility Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site
Healthcare Access						
Primary care	↔	↑	↔	↔	↑	↑
Acute care	↔	↔	↔	↔	↔	↔
Tertiary care	↔	↔	↔	↔	↔	↔
Healthcare Quality						
Quality of medical services	↔	↔	↔	↔	↔	↔
Modern, safe, and secure environment	↑	↑	↑	↑	↑	↑
Ensures forecast healthcare need is appropriately met	↔	↔	↔	↔	↔	↔
Impact on Local Community						
Human Resources:						
FTEE need (based on volume)	Decrease	Decrease	Increase	Increase	Increase	Increase
Recruitment / retention	↔	↔	↔	↔	↔	↔
Research	↑	↑	↑	↑	↑	↑
Education and Academic Affiliations	↑	↑	↑	↑	↑	↑
Use of VA Resources						
Operating cost effectiveness	-	-	-	-	-	-
Level of capital expenditures estimated	↑↑	-	-	-	-	-
Level of re-use proceeds	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑
Cost avoidance opportunities	-	-	-	-	-	-
Overall cost effectiveness	-	-	-	-	-	-
Ease of Implementation						
Riskiness of BPO implementation	↓	↓	↔	↔	↔	↔

Assessment Summary	BPO 8	BPO 9	BPO 10	BPO 11	BPO 12	BPO 13
	Collocate Replacement Hospital on Campus of University of Louisville; Share Ancillary Services with University of Louisville	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site	Construct Replacement Hospital near University of Louisville; Collocate VBA	Construction Replacement Hospital Near University of Louisville	Construct Replacement Hospital near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care e. Establish CBOC Off-Site. Collocate VBA	Construct New Inpatient Facility Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site
Ability to Support VA Programs						
DoD sharing	↔	↔	↔	↔	↔	↑
One-VA Integration	↔	↔	↑	↔	↑	↔
Special Considerations	↔	↔	↔	↔	↔	↔
Overall Attractiveness	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑

BPO 14: Construct New Inpatient Facility Near University of Louisville; Construct New Outpatient, Domiciliary, and Nursing Home on Current Site; Collocate VBA

The initial screening criteria of access, quality, and cost were applied to this new BPO to determine if this BPO, created by the LAP, has the potential to meet or exceed the CARES objectives.

Table 17: Screening Results for BPO 14

Criteria	Screening Result
Access	This BPO is similar to other BPOs which call for building a new CBOC in order to improve access to primary care.
Quality	As this BPO is very similar to BPO 2 with respect to the construction of a new hospital on the current site, it would similarly improve compliance with "modern, safe, and secure" and with "Ensures forecast healthcare need is appropriately met".
Cost	The cost of new inpatient and outpatient facilities which this BPO calls for would be essentially the same as the cost of BPO 2. Domiciliary beds are distributed by the VISN and the VA has not allocated domiciliary beds to the Louisville site. In addition, the VISN is meeting nursing home demand through contracting or at other VISN facilities.

Local Advisory Panel and Stakeholder Reactions/Concerns

Local Advisory Panel Feedback

The Louisville LAP consists of nine members: Patricia Pittman, Chair, Brig. General (Retired) Leslie Beavers, Larry Cook, M.D., Heather French Henry, The Honorable Congresswoman Anne Northrup, Rebecca Nosil, Dr. Richard Roth, Mike Rust, and Jimmy Wardle. Three of the members are VA employees, while the other six are representatives of the community, veteran service organization, or medical affiliates.

At the second LAP meeting on October 4, 2005, following the presentation of public comments, the LAP conducted its deliberation on the BPOs. Eight of the nine members were present. At that time, the LAP proposed one new BPO, BPO 14, which was based on BPO 2 and proposed further expansion of the types of healthcare programs available at the Louisville VAMC. A second LAP BPO was proposed but did not receive a second, and is not presented in the following table. Table 18 presents the results of LAP deliberations. BPOs that were not seconded did not move on to a formal vote (indicated by "n/a" in the table).

It should be noted that the LAP was opposed to the baseline because it will not meet the modern, safe, and secure criteria and it does not provide for the VBA to be collocated. BPO 5 was recommended because it provides for a CBOC, builds a new hospital, and accommodates the VBA. BPO 9 was recommended on the basis of the shared services. BPO 14 was recommended because it offers a great deal of services, addresses the concern of driving downtown for primary care, and takes advantage of the University of Louisville services. The LAP did not support BPO 2 because it did not have a CBOC or provide for re-use; BPO 3 because it did not have a CBOC, provide for re-use, and there was no accommodation of the VBA; and BPO 4 because it did not have a CBOC, provide for re-use, and did not specifically address women's care. In

addition, the LAP did not recommend BPOs 6 through 8 because they were unclear about the term collocate, and/or it did not have a VBA, re-use options were not specified, and capacity may be lost. BPOs 10 through 13 were not recommended by the LAP because they were similar to prior BPOs where the LAP considered the word collocate to be in the immediate vicinity of the University of Louisville.

Table 18: LAP BPO Voting Results

BPO	Label	Received Motion and Seconded?	Yes	No
2	Construct Replacement Hospital at Zorn Avenue (current site) with VBA	Yes	4	4
3	Construct Replacement Hospital at Current Site without VBA	No	n/a	n/a
4	Renovate Facility with Addition; Collocate VBA	No	n/a	n/a
5	Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA	Yes	8	0
6	Collocate Replacement Hospital on Campus of University of Louisville	No	n/a	n/a
7	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville; Establish new CBOC off-site	No	n/a	n/a
8	Collocate Replacement Hospital on Campus of University of Louisville; Share Ancillary Services with University of Louisville	Yes	1	7
9	Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site	Yes	5	3
10	Construct Replacement Hospital Near University of Louisville; Collocate VBA	No	n/a	n/a
11	Construct Replacement Hospital Near University of Louisville	No	n/a	n/a
12	Construct Replacement Hospital near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site. Collocate VBA	No	n/a	n/a
13	Construct Replacement Hospital near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site	No	n/a	n/a
14	Construct New Inpatient Facility Near University of Louisville; Construct new Outpatient, Domiciliary and Nursing Home on Current Site; Collocate VBA	Yes	7	0

Stakeholder Feedback on BPOs

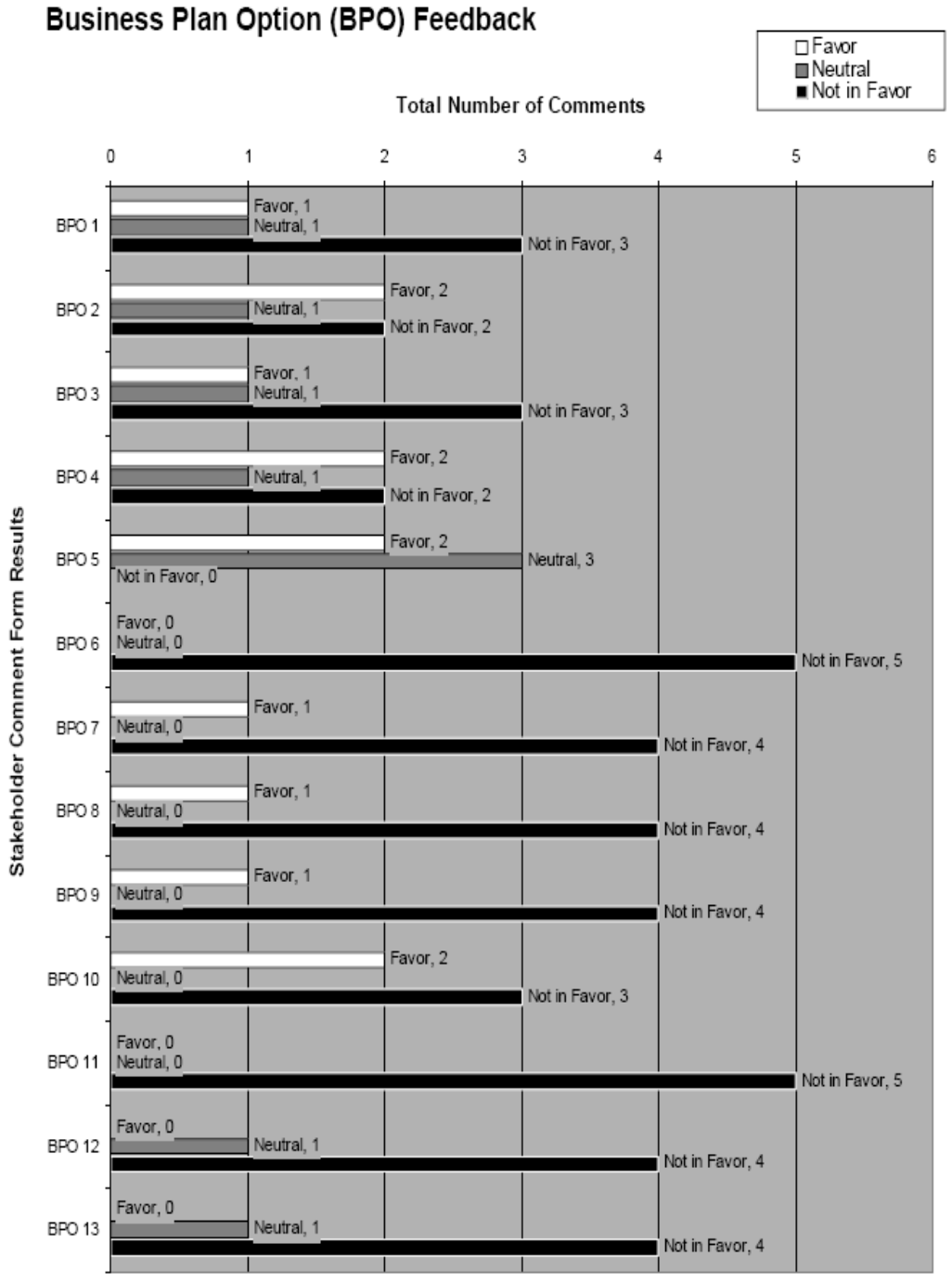
In addition to raising specific concerns, stakeholders were provided with the opportunity to provide feedback regarding the specific BPOs presented at the second LAP meeting. Through the VA CARES website and comment forms distributed at the public meeting, stakeholders were able to indicate if they "favor", are "neutral", or are "not in favor" of each of the BPOs. The results of this written and electronic feedback are provided in Figure 6.

Very few stakeholders submitted views on the proposed BPOs. In general, no BPO received significant favorable endorsement from stakeholders, although BPO 5 was not opposed by any of the 5 stakeholders who expressed a view on it, and BPOs 2 and 4 were supported and opposed by 2 stakeholders in each instance.

Figure 6: Stakeholder Feedback on BPOs[14]

Analysis of Written and Electronic Inputs (Written and Electronic Only):

The feedback received from the Options Comment Forms for the Louisville study site is as follows:



Baseline

Construct Replacement Hospital at Zorn Avenue (current site) with VBA

Construct Replacement Hospital at Current Site without VBA

Renovate Facility with Addition; Collocate VBA

Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA

Collocate Replacement Hospital on Campus of University of Louisville

Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville; Establish new CBOC off-site

Collocate Replacement Hospital on Campus of University of Louisville; Share Ancillary Services with University of Louisville

Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site

Construct Replacement Hospital Near University of Louisville; Collocate VBA

Construct Replacement Hospital Near University of Louisville

Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site. Collocate VBA

Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site

[14] Stakeholder feedback is reflected in this chart only for the BPOs which were presented by Team PwC at the LAP meeting (BPOs 1-13), and not the one created by the LAP at the second public LAP meeting. Any stakeholder feedback regarding additional options was captured in the open text boxes on the comment forms.

BPO Recommendations for Assessment in Stage II

Team PwC's recommendation of BPOs to be further assessed in Stage II was determined based on several factors. Team PwC considered the pros and cons of each option, together with the results of assessments against discriminating criteria to determine the overall attractiveness of each BPO. Views and opinions of the LAP and oral and written testimony received from veterans and other interested groups were also considered. All of these inputs contributed to the selection of the BPOs to be recommended for further study in Stage II, which are summarized in Table 19 with pros and cons identified for each option.

With the exception of the baseline, the BPOs recommended for further study share some key similarities. All of them would:

- Meet increased demand for inpatient and outpatient healthcare;
- Replace the existing main hospital building with one that is modern, safe, and secure; and
- Maintain or improve the affiliation with the University of Louisville School of Medicine.

Table 19: BPO Recommendations

BPO	Pros	Cons	Rationale
BPOs Recommended by Team PwC for Further Study			
BPO 1: Baseline	• Supports continuation of research and education programs • Supports continuation of DoD sharing arrangements	• Does not address the current shortfall in meeting access guidelines for primary care • Facility will not accommodate projected utilization • Investment needed to bring the facility up to modern, safe, and secure standards, yet some non-hazardous violations will remain • Implementation risk associated with disruption to continuity of care, infrastructure, and project realization • Site topography may create potential delays in project realization and cost	• Baseline is the BPO against which all other BPOs are assessed
BPO 2: Construct Replacement Hospital at Zorn Avenue (Current Site) with VBA	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • New construction has a positive effect on patient care, research, and education • Promotes One-VA by collocating the VBA on site • Reduced implementation risk by reducing disruption to continuity of care and providing greater infrastructure flexibility	• Higher level of capital expenditures estimated for replacement hospital • Site topography may create potential delays in project realization and cost	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • Collocating VBA regional office promotes One-VA integration • Implementation risk is lower than the baseline and some other BPOs • Veteran's care is maintained at the current site. This would address the veterans' concerns regarding ease of accessibility of downtown location • BPO uses current site and minimizes risk and costs associated with acquiring new site
BPO 7: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Establish New CBOC Off-site	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • New site minimizes disruption to care during construction • New construction has a positive effect on patient care, research, and education • BPO enables entire current site to be re-used • New CBOC off-site has potential to improve access to primary care and mitigate risk of veterans' concerns regarding move to downtown location • Proximity to affiliate increases the number of quality service offerings	• Implementation risk related to obtaining a site under terms that ensure future VA flexibility to change or enlarge its healthcare service capacity without additional negotiations with the University • Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • Constructing stand-alone inpatient and specialty and limited primary outpatient care hospital collocated with the University of Louisville improves access to and the relationship with the affiliate • New site minimizes disruption to care during construction • Establishing primary care CBOC off-site (not downtown location) has the potential to improve primary care access and mitigate issues with veterans' concerns regarding ease of accessibility of downtown location • Enables entire current site to be re-used.

BPO	Pros	Cons	Rationale
BPO 9: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site.	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • New construction has a positive effect on patient care, research, and education • BPO enables entire current site to be re-used • Proximity to affiliate increases the number of quality service offerings	• Implementation risk related to obtaining a site under terms that ensure future VA flexibility to change or enlarge its healthcare service capacity without additional negotiations with the University • Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • Constructing stand-alone inpatient and specialty care hospital collocated with the University of Louisville improves access to and the relationship with the affiliate • New site minimizes disruption to care during construction • Establishing primary care CBOC off-site (not downtown location) has the potential to improve primary care access and mitigate issues with veterans' concerns regarding ease of accessibility of downtown location • Enables entire current site to be re-used • Long-term sharing arrangements should improve the quality of medical services as new technologies can be procured because of the larger number of patients
BPO 12: Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site. Collocate VBA.	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • New construction has a positive effect on patient care, research, and education • BPO enables entire current site to be re-used • New CBOC off-site has potential to improve access to primary care and mitigate risk of veterans' concerns regarding move to downtown location • Promotes One-VA by collocating the VBA on site • Proximity to affiliate increases the number of quality service offerings	• Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• New construction improves compliance with modern, safe, and secure standards and provides future flexibility • New site minimizes disruption to care during construction • Establishing primary care CBOC off-site (not downtown location) has the potential to improve primary care access and mitigate issues with veterans' concerns regarding ease of accessibility of downtown location • Collocating VBA regional office promotes One-VA integration • Implementation risk is lower as dependency to negotiate with affiliate for land, parking, etc. is potentially not required

BPO	Pros	Cons	Rationale
BPOs Not Recommended by Team PwC for Further Study			
BPO 3: Construct Replacement Hospital at Current Site Without VBA	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Uses current site • Reduced implementation risk by reducing disruption to continuity of care	• BPO 3 is the same as BPO 2, yet it does not promote One-VA integration	• BPO 3 is the same as BPO 2, yet it does not promote One-VA integration
BPO 4: Renovate Facility with Addition. Collocate VBA	• New construction improves compliance with modern, safe, and secure standards. • New construction has a positive effect on patient care, research, and education • Uses current site • Promotes One-VA by collocating VBA on site	• Higher level of capital investment estimated • Implementation risk is associated with significant renovations that may disrupt provision of care to patients and further exacerbate space shortage • Longer period of construction	• Higher level of capital investment estimated as compared to the baseline • Greater implementation risk than BPOs involving replacement facility
BPO 5: Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Uses current site • New CBOC off-site has the potential to improve access to primary care delivery, and may provide greater flexibility to meet unanticipated future demand or changes in healthcare practices or technology • Promotes One-VA by collocating VBA on site	• Higher level of capital investment estimated • Implementation risk is associated with significant renovations that may disrupt provision of care to patients and further exacerbate space shortage • Longer period of construction	

BPO	Pros	Cons	Rationale
BPO 6: Collocate Replacement Hospital on Campus of University of Louisville.	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Enables entire current site to be re-used • Proximity to affiliate may increase the number of quality service offerings	• Implementation risk related to obtaining a site under terms that ensure future VA flexibility to change or enlarge its healthcare service capacity without additional negotiations with the University • Implementation risk related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• Implementation risk is associated with diminished future flexibility to meet unanticipated needs and changes in healthcare practices or technology. BPOs 7 and 9 provide similar benefits with lower implementation risk
BPO 8: Collocate Replacement Hospital on Campus of University of Louisville. Share Ancillary Services with University of Louisville.	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Lower level of capital expenditure compared to the baseline • Enables entire current site to be re-used • Proximity to affiliate may increase the number of quality service offerings	• Implementation risk related to obtaining a site under terms that ensure future VA flexibility to change or enlarge its healthcare service capacity without additional negotiations with the University • Implementation risk related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility • Implementation risk related to need to negotiate operating agreements with the University of Louisville Hospital.	
BPO 10: Construct Replacement Hospital Near University of Louisville. Collocate VBA.	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Compared to phased renovation, new construction would minimize disruptions in continuity of care • Enables entire current site to be re-used • Proximity to affiliate may increase the number of quality service offerings • Promotes One-VA by collocating VBA on site	• Implementation risk related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• Inferior to BPO 12. BPO 12 is less risky in terms of future flexibility and provides the opportunity to establish a new CBOC in a location that improves veterans' access to primary care and eases their concerns regarding parking and driving in a congested area

BPO	Pros	Cons	Rationale
BPO 11: Construct Replacement Hospital Near University of Louisville.	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Compared to phased renovation, new construction would minimize disruptions in continuity of care • Enables entire current site to be re-used • Proximity to affiliate may increase the number of quality service offerings	• Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• Inferior to BPO 12. BPO 12 is less risky in terms of future flexibility and provides the opportunity to establish a new CBOC in a location that improves veterans' access to primary care • This BPO does not promote One-VA integration
BPO 13: Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site.	• New construction improves compliance with modern, safe, and secure standards • New construction has a positive effect on patient care, research, and education • Enables entire current site to be re-used • New CBOC off-site has the potential to improve access to primary care, and may provide greater flexibility to meet unanticipated future demand or changes in healthcare practices or technology • Proximity to affiliate may increase the number of quality service offerings	• Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility	• Inferior to BPO 12. BPO 12 is less risky in terms of future flexibility • This BPO does not promote One-VA integration.
BPO 14: Construct New Inpatient Facility Near University of Louisville. Construct New Outpatient, Domiciliary, and Nursing Home on Current Site; Collocate VBA.	• Similar to BPOs 11 and 12, this option would be a low-risk way to modernize facilities providing inpatient and outpatient services • New construction has a positive effect on patient care, research, and education • This BPO presents a potential re-use of the current site.	• Implementation risk is related to locating the hospital in a congested downtown area with potentially more difficult parking that could have an adverse effect on veterans' willingness to use the facility • VA has not allocated domiciliary or nursing home bed demand to this site.	• Although this BPO presents a potential re-use of the current site, VA has not allocated domiciliary beds to this site and is meeting nursing home demand through contracting or at other VISN facilities

Appendix A - Assessment Tables

BPO 1: Baseline

Assessment of BPO 1	
Healthcare Access	
Primary	62% of enrolees are within the drive time guidelines. The primary care access threshold is 70%. Therefore, Louisville does not meet the drive time access guideline for primary care.
Acute	83% of enrolees are within the drive time guidelines. The acute care access threshold is 65%. Therefore Louisville meets the drive time access guideline for acute care.
Tertiary	100% of enrollees are within the drive time guideline. The tertiary care threshold is 65%. Therefore, Louisville meets the access guideline for tertiary care.
Healthcare Quality	
Quality of medical services	According to 2004 data, the Louisville VAMC achieved higher selected quality scores for ambulatory care and patient satisfaction (ambulatory care) as compared to the VISN and overall national scores. The Louisville VAMC achieved the same or lower quality measures for inpatient patient satisfaction, selected behavioral health services, and selected inpatient care services.
Modern, safe, and secure environment	With significant renovation, the baseline conforms to current industry standards and code requirements for healthcare environments, and allows exception for non-hazardous existing conditions which were code compliant at the time of their construction.
Ensures forecast healthcare need is appropriately met	Assumes that in order to maintain quality of care and meet VA thresholds for clinical volume, VA will make necessary operational adjustments (e.g. staffing or contract arrangements).
Impact on VA and Local Community	
Human Resources:	
FTEE need (based on volume)	With the projected increase in utilization, FTEE levels would increase to the extent services are not contracted out.
Recruitment / retention	Louisville VAMC is reported to be a competitive employer in the marketplace and does not face recruitment and retention challenges. This environment is expected to be maintained in the baseline.
Research	The current program focuses mainly in the areas of cancer and cardiovascular research in collaboration with the University of Louisville. The annual funding level is estimated at $2.5 million
Education and Academic Affiliations	Affiliations exist with the University of Louisville and numerous other allied health schools. Over 400 medical residents, 200 medical students, and more than 400 allied health trainees receive training annually.

Assessment of BPO 1	
Use of VA Resources	
Operating cost effectiveness	Louisville VAMC operating costs include those costs associated with providing care onsite at the Louisville facility, as well as purchasing care for the following CICs: eye clinic, non-surgical specialties, surgical and related specialties, and urology services provided by local community providers. Renovations would require contracting out of services and, therefore, higher operating costs. Therefore, the baseline operating cost effectiveness is expected to be higher than the current operating cost effectiveness.
Level of capital expenditures estimated	Level of capital expenditures estimated includes the costs identified by the facility and captured in the CAI database reflecting essential maintenance and capital required to achieve a modern, safe, and secure environment.
Level of re-use proceeds	Not applicable for the baseline.
Cost avoidance	In the baseline, it is assumed that the amount of money identified by the facility in the CAI database as essential maintenance would be fully expended.
Overall cost effectiveness	Not applicable for the baseline.
Ease of Implementation	
Riskiness of BPO Implementation	The baseline option presents implementation risk in terms of the following major risk areas: • Continuity of Care - Significant renovations may disrupt provision of care to patients and further exacerbate space shortage; • Infrastructure - Any significant renovation would entail addressing dead-end corridor issues, and could entail addressing significant environmental issues. The baseline does not provide any future flexibility for increased demand or accommodate unanticipated future demand or changes in healthcare practices or technology. • Project Realization - The expected complexity of renovating current facilities while continuing to provide patient care could result in delays, the need for additional resources, and transition complications.
Ability to Support VA Programs	
DoD sharing	The Louisville VAMC operates a clinic at the Ireland Army Hospital at Fort Knox, Kentucky and one at the Louisville National Guard complex for TRICARE beneficiaries. The Louisville VAMC also has numerous sharing agreements with the Ireland Army Community Hospital at Fort Knox. An inpatient agreement is in place for psychiatry, medical, surgical, neurological, and sleep studies. The baseline supports these current sharing arrangements.
One-VA Integration	There is a VBA regional office located in downtown Louisville.
Special Considerations	No special considerations are noted.

BPO 2: Construct Replacement Hospital at Zorn Avenue (Current Site) with VBA

Assessment of BPO 2	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will remain at the same location as the baseline.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will continue to be provided at the current location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will continue to be provided at the current location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by VA or current providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	Similar to the baseline, a replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-campus capacity.
Recruitment / retention	↑	Modern facilities and equipment enhance recruitment and retention.
Research	↑	Modern facilities and equipment have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies may be gained through new facilities, the estimated savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	↓↓	Capital expenditures for construction of replacement hospital and VBA office are greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	-	No material re-use proceeds are expected since no re-use property is available.

Assessment of BPO 2	Comparison to Baseline	Description of Impact
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs are similar to the baseline. Although the total capital expenditures required are higher than the baseline, they are not significant enough to increase the overall net present cost. Thus, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↑	This BPO is less risky than the baseline in terms of the following risk categories: • Infrastructure: Replacing hospital on site will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. • Continuity of Care - New construction will result in less disruption than renovation
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DoD sharing arrangements.
One-VA Integration	↑	One-VA integration would be improved by the collocation of the VBA regional office on site because beneficiaries would be able to receive both healthcare and VBA services at the same location.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 3: Construct Replacement Hospital at Current Site Without VBA

Assessment of BPO 3	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will remain at the same location as the baseline.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will continue to be provided at the current location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will continue to be provided at the current location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	Similar to the baseline, a replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-campus capacity.
Recruitment / retention	↑	Modern facilities and equipment enhance recruitment and retention.
Research	↑	Modern facilities and equipment have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies may be gained through new facilities, the estimated savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Capital expenditures for new construction are not materially greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	-	No material re-use proceeds are expected since no re-use property is available.

Assessment of BPO 3	Comparison to Baseline	Description of Impact
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Both operating costs and capital expenditures are similar to the baseline. Therefore, the BPO results in a similar level of net present cost as the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↑	This BPO is less risky than the baseline in terms of the following risk categories: • Infrastructure: Replacing hospital on site will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. • Continuity of Care - New construction will result in less disruption than renovation
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DoD sharing arrangements.
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 4: Renovate Facility with Addition; Collocate VBA

Assessment of BPO 4	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will remain at the same location as the baseline.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will continue to be provided at the current location of provision.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will continue to be provided at the current location of provision.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves compliance with modern, safe, and secure standards.
Ensures forecast healthcare need is appropriately met	↔	A renovated hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-campus volume
Recruitment / retention	↑	Modern facilities and equipment enhance recruitment and retention.
Research	↑	Modern facilities and equipment have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies may be gained through new facilities, the estimated savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	↓↓	Capital expenditures for renovations and construction of new addition are greater than baseline capital expenditures for renovations to existing buildings.

Assessment of BPO 4	Comparison to Baseline	Description of Impact
Level of re-use proceeds	-	No material re-use proceeds are expected since no re-use property is available.
Cost avoidance opportunities	-	This BPO requires extensive renovation, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs are similar to the baseline. Although the total capital expenditures required are higher than the baseline, they are not significant enough to increase the overall net present cost. Thus, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of Care - Significant renovations may disrupt provision of care to patients and further exacerbate space shortage. Thus, the BPO has materially the same level of risk as the baseline
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DoD sharing arrangements.
One-VA Integration	↑	One-VA integration would be improved by the collocation of the VBA regional office on site because beneficiaries would be able to receive both healthcare and VBA services at the same location.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 5: Renovate Facility with Addition (Inpatient and Specialty and Limited Primary Outpatient Care); Establish new CBOC off-site; Collocate VBA

Assessment of BPO 5	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↑	The addition of the CBOC, in conjunction with offering primary care services at the newly constructed facility, has the potential to improve access.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will continue to be provided at the current location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will continue to be provided at the current location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves compliance with modern, safe, and secure standards.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-campus volume
Recruitment / retention	↑	Modern facilities and equipment enhance recruitment and retention.
Research	↑	Modern facilities and equipment have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Operating efficiencies may be gained through new addition, but the estimated savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	↓↓	Capital expenditures for renovations and construction of new addition are greater than baseline capital expenditures for renovations to existing buildings.

Assessment of BPO 5	Comparison to Baseline	Description of Impact
Level of re-use proceeds	-	No material re-use proceeds are expected since no re-use property is available.
Cost avoidance opportunities	-	This BPO requires extensive renovation, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs are similar to the baseline. Although the total capital expenditures required are higher than the baseline, they are not significant enough to increase the overall net present cost. Thus, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of Care - Significant renovations may disrupt provision of care to patients and further exacerbate space shortage. Thus, the BPO has materially the same level of risk as the baseline
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DoD sharing arrangements.
One-VA Integration	↑	One-VA integration would be improved by the collocation of the VBA regional office on site because beneficiaries would be able to receive both healthcare and VBA services at the same location.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 6: Collocate Replacement Hospital on Campus of University of Louisville

Assessment of BPO 6	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will be provided at a location within five miles of the baseline location.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the baseline location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the baseline location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-site volume.
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g., cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance education and training programs.

Assessment of BPO 6	Comparison to Baseline	Description of Impact
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital, the overall level of capital expenditures will not be materially greater than the baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Both operating costs and capital expenditures are similar to the baseline. Therefore, despite potential re-use proceeds, the BPO results in a similar level of net present cost as the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↓	This BPO is riskier than the baseline in terms of the following risk categories: • Legal and contractual - BPO would require VA to negotiate appropriate arrangements with the University to acquire legal interest in the site and ensure no interruption in the delivery of care. The need to negotiate sharing of services could increase this risk. • Infrastructure - VA may not be able to acquire a site that is large enough to accommodate the services to be collocated and provide flexibility to meet unanticipated future demand or changes in healthcare practices or technology. • Continuity of care- Location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted.

Assessment of BPO 6	Comparison to Baseline	Description of Impact
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 7: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville; Establish New CBOC Off-Site

Assessment of BPO 7	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↑	The addition of the CBOC, in conjunction with offering primary care services at the newly constructed facility, has the potential to improve access.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-site volume.
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance education and training programs.

Assessment of BPO 7	Comparison to Baseline	Description of Impact
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital and CBOC, the overall level of capital expenditures will not be materially greater than the baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Both operating costs and capital expenditures are similar to the baseline. Therefore, despite potential re-use proceeds, the BPO results in a similar level of net present cost as the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↓	This BPO is riskier than the baseline in terms of the following risk categories: • Legal and contractual - BPO would require VA to negotiate appropriate arrangements with the University to acquire legal interest in the site and ensure no interruption in the delivery of care. The need to negotiate sharing of services could increase this risk. • Infrastructure - VA may not be able to acquire a site that is large enough to accommodate the services to be collocated and provide flexibility to meet unanticipated future demand or changes in healthcare practices or technology. • Continuity of care- Location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted

Assessment of BPO 7	Comparison to Baseline	Description of Impact
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 8: Collocate Replacement Hospital on Campus of University of Louisville; Share Ancillary Services with University of Louisville

Assessment of BPO 8	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will be provided at a location within five miles of the existing location.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all patient care will continue to be provided by the VA or baseline contract providers, and shared services would have to meet VA quality measures.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Decrease	Slight decrease in FTEE need based on sharing of ancillary services.
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment have the potential to enhance education and training programs.

Assessment of BPO 8	Comparison to Baseline	Description of Impact
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	↑↑	Reduced capital expenditures required because new hospital does not require space for ancillary services due to sharing of services with the University of Louisville. Therefore, the overall level of capital expenditures will be less than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs are similar to the baseline. Although total capital expenditures are reduced, they do not significantly affect overall net present cost. Thus, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↓	This BPO is riskier than the baseline in terms of the following risk categories: • Legal and contractual - BPO would require VA to negotiate appropriate arrangements with the University to acquire legal interest in the site and ensure no interruption in the delivery of care. The need to negotiate sharing of services could increase this risk. • Infrastructure - VA may not be able to acquire a site that is large enough to accommodate the services to be collocated and provide flexibility to meet unanticipated future demand or changes in healthcare practices or technology. • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility.

Assessment of BPO 8	Comparison to Baseline	Description of Impact
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 9: Collocate Inpatient and Specialty and Limited Primary Outpatient Care on Campus of University of Louisville. Share Ancillary Services with University of Louisville. Establish CBOC Off-Site

Assessment of BPO 9	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↑	The addition of the CBOC, in conjunction with offering primary care services at the newly constructed facility, has the potential to improve access.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all patient care will continue to be provided by the VA or baseline contract providers, and shared services would have to meet VA quality measures.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Decrease	Slight decrease in FTEE need based on sharing of ancillary services.
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance education and training programs.

Assessment of BPO 9	Comparison to Baseline	Description of Impact
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Reduced capital expenditures for the new hospital since it does not require space for ancillary services which will be shared with the University of Louisville. However, additional capital expenditures are required for the new CBOC. Therefore, the overall level of capital expenditures is not materially different compared to the baseline.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Both operating costs and capital expenditures are similar to the baseline. Therefore, the BPO results in a similar level of net present cost as the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↓	This BPO is riskier than the baseline in terms of the following risk categories: • Legal and contractual - BPO would require VA to negotiate appropriate arrangements with the University to acquire legal interest in the site and ensure no interruption in the delivery of care. The need to negotiate sharing of services could increase this risk. • Infrastructure - VA may not be able to acquire a site that is large enough to accommodate the services to be collocated and provide flexibility to meet unanticipated future demand or changes in healthcare practices or technology. • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements.
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.

Assessment of BPO 9	Comparison to Baseline	Description of Impact
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 10: Construct Replacement Hospital Near University of Louisville; Collocate VBA

Assessment of BPO 10	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will be provided at a location within five miles of the existing location.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increase in FTEEs needed to serve greater on-campus volume
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as the baseline.
Research	↑	Modern facilities and equipment, as well as increased proximity to the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as increased proximity to the University of Louisville, have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary

Assessment of BPO 10	Comparison to Baseline	Description of Impact
		services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital and VBA, the overall level of capital expenditures will not be materially greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs and capital expenditures are similar to the baseline. Therefore, despite re-use proceeds, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility. Thus, the BPO has materially the same level of risk as the baseline.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements.
One-VA Integration	↑	One-VA integration would be improved by the collocation of the VBA regional office on site because beneficiaries would be able to receive both healthcare and VBA services at the same location.
Special Considerations	↔	No special considerations noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 11: Construct Replacement Hospital Near University of Louisville

Assessment of BPO 11	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines, since primary care services will be provided at a location within five miles of the existing location.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased FTEEs needed to serve greater on-campus volume
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as collocation with the University of Louisville, have the potential to enhance education and training programs.
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary

Assessment of BPO 11	Comparison to Baseline	Description of Impact
		services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital, the overall level of capital expenditures will not be materially greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs and capital expenditures are similar to the baseline. Therefore, despite re-use proceeds, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility. Thus, the BPO has materially the same level of risk as the baseline.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements.
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted.
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 12: Construct Replacement Hospital Near University of Louisville for Inpatient and Specialty and Limited Primary Outpatient Care. Establish CBOC Off-Site. Collocate VBA.

Assessment of BPO 12	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↑	The addition of the CBOC, in conjunction with offering primary care services at the newly constructed facility, has the potential to improve access.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will continue to be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will continue to be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased number of staff needed to serve greater on-site volume
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as closer proximity to the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as closer proximity to the University of Louisville, have the potential to enhance education and training programs.
Use of VA Resources		

Assessment of BPO 12	Comparison to Baseline	Description of Impact
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital, VBA and CBOC, the overall level of capital expenditures will not be materially greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs and capital expenditures are similar to the baseline. Therefore, despite re-use proceeds, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility. Thus, the BPO has materially the same level of risk as the baseline.
Ability to Support VA Programs		
DoD sharing	↔	Similar to the baseline, this BPO would support current DOD sharing arrangements.
One-VA Integration	↑	One-VA integration would be improved by the collocation of the VBA regional office on site because beneficiaries would be able to receive both healthcare and VBA services at the same location.
Special Considerations	↔	No special considerations are noted.

Assessment of BPO 12	Comparison to Baseline	Description of Impact
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

BPO 13: Construct Replacement Hospital Near University of Louisville for Inpatient, Specialty, and Limited Primary Care. Establish CBOC Off-Site.

Assessment of BPO 13	Comparison to Baseline	Description of Impact
Healthcare Access		
Primary	↑	The addition of the CBOC, in conjunction with offering primary care services at the newly constructed facility, has the potential to improve access.
Acute	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for acute care, since acute care services will be provided at a location within five miles of the existing location.
Tertiary	↔	No material change is expected to the percentage of enrollees meeting VA drive time access guidelines for tertiary care, since tertiary care services will be provided at a location within five miles of the existing location.
Healthcare Quality		
Quality of medical services	↔	No material change to the quality of medical services is anticipated since all medical services will continue to be provided by the VA or baseline contract providers.
Modern, safe, and secure environment	↑	New construction improves adherence to modern, safe, and secure standards by eliminating non-compliant conditions that exist in the baseline.
Ensures forecast healthcare need is appropriately met	↔	A replacement hospital would provide sufficient capacity to meet current and projected demand in facilities designed to serve veterans' healthcare needs.
Impact on VA and Local Community		
Human Resources: FTEE need (based on volume)	Increase	Increased FTEEs needed to serve greater on-site volume
Recruitment / retention	↔	Although modern facilities and equipment may enhance recruitment and retention, downtown location may not offer the same favorable working conditions (e.g. cost of parking) as baseline.
Research	↑	Modern facilities and equipment, as well as closer proximity to the University of Louisville, have the potential to enhance research programs.
Education and Academic Affiliations	↑	Modern facilities and equipment, as well as closer proximity to the University of Louisville, have the potential to enhance education and training programs.

Assessment of BPO 13	Comparison to Baseline	Description of Impact
Use of VA Resources		
Operating cost effectiveness	-	Although operating efficiencies would be gained through proximity to the University of Louisville and potential sharing of technology and ancillary services, savings are not expected to be significant. Therefore, the BPO has the potential to require materially the same operating costs as the baseline.
Level of capital expenditures estimated	-	Although there are capital expenditures for new construction anticipated for the new hospital and CBOC, the overall level of capital expenditures will not be materially greater than baseline capital expenditures for renovations to existing buildings.
Level of re-use proceeds	↑↑↑	Enables re-use of entire current site as services are moved to University of Louisville campus, and, therefore, has significantly higher re-use proceeds compared to the baseline.
Cost avoidance opportunities	-	This BPO requires the construction of a new facility, the cost of which is equal to or higher than renovations required by the baseline. Therefore, there are no cost avoidance opportunities in terms of capital investment.
Overall cost effectiveness	-	Operating costs and capital expenditures are similar to the baseline. Therefore, despite re-use proceeds, the BPO results in a similar level of net present cost compared to the baseline.
Ease of Implementation		
Riskiness of BPO implementation	↔	This BPO is less risky than the baseline in terms of: • Infrastructure - The BPO will provide essential flexibility in meeting unanticipated future demand or changes in healthcare practices or technology. However, this BPO is more risky than the baseline in terms of: • Continuity of care, since location in a congested downtown area with potentially more difficult parking could have an adverse effect on veterans' willingness to use the facility. Thus, the BPO has materially the same level of risk as the baseline.
Ability to Support VA Programs		
DoD sharing	↑	Similar to the baseline, this BPO would support current DOD sharing arrangements.
One-VA Integration	↔	VA Regional Office remains located in downtown Louisville.
Special Considerations	↔	No special considerations are noted.

Assessment of BPO 13	Comparison to Baseline	Description of Impact
Overall Attractiveness	↑↑	This BPO will likely maintain access and overall cost effectiveness; however, compared to the baseline, it improves quality. Thus, BPO 2 is more attractive than the baseline.

Appendix B - Glossary

Acronyms

AFB	Air Force Base
AMB	Ambulatory
BPO	Business Plan Option
CAI	Capital Asset Inventory
CAP	College of American Pathologists
CARES	Capital Asset Realignment for Enhanced Services
CBOC	Community Based Outpatient Clinic
CIC	CARES Implementation Category
DoD	Department of Defense
FTEE	Full Time Employee Equivalent
GFI	Government Furnished Information
HEDIS	Health Plan Employer Data and Information Set
ICU	Intensive Care Unit
IP	Inpatient
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
OP	Outpatient
MH	Mental Health
MOU	Memorandum of Understanding
N/A	Not Applicable
NFPA	National Fire Protection Association
PTSD	Post Traumatic Stress Disorder

SOW	Statement of Work
VA	Department of Veterans Affairs
VACO	VA Central Office
VAMC	Veterans Affairs Medical Center
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network

Definitions

Access	Access is the determination of the numbers of actual enrollees who are within defined travel time parameters for primary care, acute hospital care, and tertiary care after adjusting for differences in population and density and types of road.
Alternative Business Plan Options	Business Plan Options generated as alternatives to the baseline Business Plan Option providing other ways VA could meet the requirements of veterans at the Study Site.
Ambulatory Services	Services to veterans in a clinic setting that may or not be on the same station as a hospital, for example, a Cardiology Clinic. The grouping as defined by VA also includes several diagnostic and treatment services, such as Radiology.
Baseline Business Plan Option	The Business Plan Option for VA which does not change any element of the way service is provided in the study area. "Baseline" describes the current state projected out to 2013 and 2023 without any changes to facilities or programs or locations and assumes no new capital expenditure (greater than $1 million). Baseline state accounts for projected utilization changes, and assumes same or better quality, and necessary maintenance for a safe, secure, and modern healthcare environment.

Business Plan Option (BPO)	The options developed and assessed by Team PwC as part of the Stage I and Stage II Option Development Process. A business plan option consists of a credible healthcare plan describing the types of services, and where and how they can be provided and a related capital plan, and an associated reuse plan.
Capital Asset Inventory (CAI)	The CAI includes the location and planning information on owned buildings and land, leases, and agreements, such as enhanced-use leases, enhanced sharing agreements, outleases, donations, permits, licenses, inter- and intra-agency agreements, and ESPC (energy saving performance contracts) in the VHA capital inventory.
CARES Implementation Category (CIC)	One of 25 categories under which workload is aggregated in VA demand models. *(See Workload)*
Clinic Stop	A visit to a clinic or service rendered to a patient.
Clinical Inventory	The listing of clinical services offered at a given station.
Code	Compliance with auditing/reviewing bodies such as JCAHO, NFPA Life Safety Code or CAP.
Community Based Outpatient Clinic (CBOC)	An outpatient facility typically housing clinic services and associated testing. A CBOC is VA operated, contracted, or leased and is geographically distinct or separate from the parent medical facility.
Cost Effectiveness	A program is cost-effective if, on the basis of life-cycle cost analysis of competing alternatives, it is determined to have the lowest costs expressed in present value terms for a given amount of benefits.
Domiciliary	A VA facility that provides care on an ambulatory self-care basis for veterans disabled by age or disease who are not in need of acute hospitalization and who do not need the skilled nursing services provided in a nursing home.
Enhanced Use Lease	A lease of real property to non-government entities, under the control and/or jurisdiction of the Secretary of Veterans Affairs, in which monetary or "in-kind" consideration (i.e., the provision of goods, facilities, construction, or services of the benefit to the Department) is received. Unlike traditional federal leasing authorities in which generated proceeds must be deposited into a general treasury account, the enhanced-use leasing authority provides that all proceeds (less any costs than can be reimbursed) are returned to medical care appropriations.

Good Medical Continuity	A determination that veterans being cared for a given condition will have access to the appropriate array of primary, secondary, and tertiary care services required to treat that condition.
Initial Screening Criteria	A series of criteria used as the basis of the assessment of whether or not a particular Business Plan Option has the potential to meet or exceed the CARES objectives.
Inpatient Services	Services provided to veterans in the hospital or an inpatient unit, such as a Surgical Unit or Spinal Cord Injury Unit.
Market Area	Geographic areas or boundaries (by county or zip code) served by that Network's medical facilities. A Market Area is of a sufficient size and veteran population to benefit from coordinated planning and to support the full continuum of healthcare services. (*See Sector)*
Mental Health Indicators	See the end of this document.
Multispecialty Clinic	A VA medical facility providing a wide range of ambulatory services such as primary care, specialty care, and ancillary services usually located within a parent VA facility.
Nursing Home	The term "nursing home care" means the accommodation of convalescents or other persons who are not acutely ill and not in need of hospital care, but who require nursing care and related medical services, if such nursing care and medical services are prescribed by, or are performed under the general direction of, persons duly licensed to provide such care. Such term includes services furnished in skilled nursing care facilities, in intermediate care facilities, and in combined facilities. It does not include domiciliary care.
Primary Care	Healthcare provided by a medical professional with whom a patient has initial contact and by whom the patient may be referred to a specialist for further treatment. *(See Secondary Care and Tertiary Care)*
Re-use	An alternative use for underutilized or vacant facility space or VA owned land.
Risk	Any barrier to the success of a Business Planning Option's transition and implementation plan or uncertainty about the cost or impact of the plan.

Secondary care	Medical care provided by a specialist or facility upon referral by a primary care physician that requires more specialized knowledge, skill, or equipment than the primary care physician has. *(See Primary Care and Tertiary Care)*
Sector	Within each Market Area are a number of sectors. A sector is one or more contiguous counties. *(See Market Area)*
Stakeholder	A person or group who has a relationship with VA facility being examined or an interest in what VA decides about future activities at the facility.
Tertiary care	High specialized medical care usually over an extended period of time that involves advanced and complex procedures and treatments performed by medical specialists. *(See Primary Care and Secondary Care)*
Workload	The amount of CIC units by category determined for each market and facility by the Demand Forecast.

Mental Health Indicators

Indicator	Description
New Dx Dep - F/U X3 (mdd6n)	Percentage of patients with a new diagnosis of depression who have at least three clinical follow-up visits in the 12 acute periods after diagnosis (current PM)
New Dx Dep - Meds (mdd7n)	Percentage of patients with a new diagnosis of depression who have medication for at least 84 days in the acute treatment period (current PM)
Homeless Dchg Indep (fnct2n)	Percentage of veterans discharged from a domiciliary care for homeless veterans (DCHV), grand and per diem program, or healthcare for homeless veterans community-based contract residential care program to independent living
Screen for Alcohol (sa3)	Percentage of patients screened for high risk alcohol use with the AUDIT-C instrument (past and current PM)
Screen for MHICM (mhc1)	Percentage of psychiatry patients with high utilization of inpatient psychiatry services who are screened for mental health intensive care case management (past and current PM)
Screen for PTSD (ptsd1)	Percentage of all veterans screened for post traumatic stress disorder (PTSD) in the previous 12 months (SI)
SUD Cont of Care (sa5)	Percentage of patients entering specialty substance abuse treatment who maintain continuity of care for at least 90 days (past and current PM)