



National Planning Strategy

Blind Rehabilitation Service

May 2021



Table of Contents

Executive Summary	. 2
1. Program Overview	. 5
1.1 Program Mission	. 5
2. Current State Overview	. 7
2.1 Demographic and Programmatic Distribution Analysis	. 7
2.2 Current VA Program Review and Analysis	15
2.3 Commercial and other Federal Provider Trends	26
3. Leading Practices	29
3.1 Leading Practices Analysis	29
4. Service Planning Framework	34
4.1 Program Priorities	34
4.2 Geographic Service Area	35
4.3 Planning Guidelines	35
5. Future Program Planning	41
5.1 Applying the Blind Rehabilitation National Planning Strategy to VA Market Assessments	41
Appendix A: References	43
Appendix B: Interviews	47
Appendix C: Acronyms	48
Appendix D: Data	50
Appendix E: Definitions	56
Appendix F: VIST Coordinator Staffing Guidelines	57
Appendix G: Blind Rehabilitation Services Levels of Care Coordination	58



Executive Summary

The Department of Veterans Affairs (VA) Market Area Health Systems Optimization (MAHSO) effort developed 96 draft market assessments in the 18 VA Veteran Integrated Service Networks (VISNs) to produce opportunities for the design of high-performing integrated delivery networks. These market assessments were required by the VA Maintaining Systems and Strengthening Integrated Outside Networks (MISSION) Act of 2018.

These market assessments will culminate with a National Realignment Strategy that will present Veterans Health Administration's (VHA's) plan for the future of VA health care, enabling Veterans to access the right high-quality care in the right location. Recommendations from the market assessments will be finalized and submitted by the Secretary of VA to the presidentially appointed Asset and Infrastructure Review (AIR) Commission for consideration. The AIR Commission will submit its recommendations to the President for review and approval, prior to them sending to Congress for review and approval.

This Blind Rehabilitation National Planning Strategy establishes a consistent set of guidelines which will help to develop the opportunities that are specific to Blind Rehabilitation services. Using comprehensive VA data, the guidelines can facilitate improved alignment of Blind Rehabilitation capacity and capabilities with the evolving needs of Veterans.

The VHA Chief Strategy Office (CSO), committed to working with offices across the organization to create programs and services that best serve Veterans, developed the Blind Rehabilitation National Planning Strategy in consultation with the Blind Rehabilitation Service National Program Office.

Blind Rehabilitation Service Program Overview

Blind Rehabilitation Service Program Mission

The mission of VA's Blind Rehabilitation Service (BRS) is "to assist eligible Veterans and Service members with a visual impairment in developing the skills needed for personal independence and successful reintegration into the community and family environment. BRS programs are Veteran-centered and interdisciplinary, developing and deploying integrated plans of care that address the Veterans' needs and goals to guide service delivery." ¹

Programmatic Overview

There are currently 13 inpatient Blind Rehabilitation Centers (BRC) for inpatient care and 52 outpatient clinics divided into three levels of acuity: Intermediate Low Vision Clinics (ILVCs), Advanced Low Vision Clinics (ALVCs) and Visual Impairment Services Outpatient Rehabilitation (VISOR) programs. Except for VISNs 16 and 20, each VISN



has both ILVCs and ALVCs. Every VISN without an inpatient BRC was provided funding for a high acuity VISOR program, except for VISN 9. ² Visual Impairment Services (VIST) coordinators and Blind Rehabilitation Specialists (BROS) are also vital services and positions in the continuum of care.

Veteran utilization increases significantly as Veterans age, almost doubling for Veterans aged 45-64 and again for ages 65-85. Base year (BY).^{*} 2017 10-year projections for Inpatient Blind Rehabilitation Average Daily Census (ADC) increase 18.6%, from 165.7 to 196.6 beds. ³

BRS comprises a wide range of inpatient and outpatient programs and services to Veterans with visual impairments. The level of services available are dependent on the location, resources available, and space/co-location requirements for Veterans requiring blind and low vision services. This service is not well duplicated in the private sector, leading to high reliance on VA and limited community options. The distribution and utilization of inpatient and outpatient Blind Rehabilitation services needs to be optimized to maximize access to care for Veterans.

Resulting Planning Guidelines and Thresholds

Planning guidelines and thresholds inform products of the market assessment process. The rationale for establishing VA planning guidelines and thresholds are rooted in the belief that quality of care or patient safety may be compromised when a service falls below identified measures.

As a result, the planning priorities for BRS are to:

- Align VA resources with current and future Veteran geographical distribution
- Improve timely access to care
- Address increased demand for outpatient services, services for women Veterans, and telehealth

Planning guidelines for BRS are collectively designed to support access across the continuum of Blind Rehabilitation services at the regional level.

The Blind Rehabilitation National Planning Strategy developed quantitative and qualitative planning guidelines across demand, supply, access, quality, and other applicable domains for each service type. A summary of the primary demand planning guidelines is as follows:

^{*}The base year (BY) is the first (or index) year of a series of years in a projection model upon which the projections are based.



Blind Rehabilitation Planning Guidelines

Service	Primary Planning Guideline	
Geography	Creation of five referral pathway catchment areas for BRS Northeast: VISNs 1, 2, 4, 5, and 10 Southeast: VISNs 6, 7, 8, and 9 Central: VISNs 12, 15, and 23 Southwest: VISNs 16, 17, and 22 Northwest: VISNs 19, 20, and 21 	
Blind Rehabilitation Center (BRC)	 Open and Maintain: Based on three tier bed system: <15 bed tier: Projected current facility ADC of 8.8-9.4 15-25 bed tier: Projected current facility ADC of 15.4-16.3 26+ bed tier: Projected current facility ADC of 24.5-26.1 80.0-85.0% target occupancy rate 	

Future Program Planning

The four-step process for revisiting MAHSO draft opportunities describes how Blind Rehabilitation-specific market assessment opportunities will be reviewed and updated, if necessary.

- 1. Review Phase 1-3 market assessment data and Blind Rehabilitation opportunities
- 2. Apply Blind Rehabilitation planning guidelines
- 3. Update/Create Blind Rehabilitation opportunities
- 4. Review and finalize opportunities with VA Leadership

VA will use the national planning guidelines to apply standard programmatic criteria to major strategic opportunities identified in the market assessments. The planning guidelines will also inform future quadrennial market assessments and other long-range planning exercises.



1. Program Overview

1.1 Program Mission

Mission

The Department of Veterans Affairs (VA) provides blind and vision rehabilitation programs to Veterans and active duty Service members with visual impairment. The mission of VA's Blind Rehabilitation Service (BRS) Continuum of Care (CoC) is "to assist eligible Veterans and Service members with a visual impairment in developing the skills needed for personal independence and successful reintegration into the community and family environment. BRS programs are Veteran-centered and interdisciplinary, developing and deploying integrated plans of care that address the Veterans' needs and goals." ¹

The BRS vision is to "provide high quality care in a timely and appropriate manner enabling Veterans with a visual impairment to acquire the skills and capabilities necessary for the development of personal independence and emotional stability." ⁴

38 U.S.C. § 1706 ⁵ requires Veterans Health Administration (VHA) to maintain its capacity at or above levels set in 1996 to treat disabled Veterans that need specialized treatment or rehabilitation, including "those with blindness." ⁶

Opportunity Statement

BRS comprises a wide range of inpatient and outpatient programs and services to Veterans with visual impairments. The level of services available are dependent on the location, resources available, and space/co-location requirements for Veterans requiring blind and low vision services. This service is not well duplicated in the private sector, leading to high reliance on VA, and limited community options. The distribution and utilization of inpatient and outpatient Blind Rehabilitation services needs to be optimized to maximize access to care for Veterans.

Program Challenges

BRS faces several key challenges that the BRS National Program Office is working to address: ⁶

- **Resource allocation**: There are variations in resources available within a Veteran Integrated Service Networks (VISN) or region, both within BRS and with key stakeholders such as Eye Care.
- **Pathway to referral**: Referral management and placement of Visual Impairment Service Team (VIST) coordinators are uneven, contributing to disparities in facility utilization and wait times.
- **Timely access**: Wait times are longer than desired for various BRS programs.



- **Geographical relocation:** Shifts occur in the demographics of Veterans with visual impairments, with varying rates of growth or decline by VISN.
- Addressing needs of women Veterans: The growth in women Veterans will require changes in inpatient facility design.
- Increased demand for outpatient low vision rehabilitation: There are shifts in demand toward low vision and outpatient services due to medical advances and earlier treatment to slow disease progression.
- **Governance**: There is a lack of established BRS reporting structures for local VA Medical Centers (VAMCs), VISNs, and Department of Veterans Affairs Central Office (VACO).
- **Community care**: There is a lack of comparable community care options in many areas and inpatient services are non-billable. In areas where community care outpatient options are available, BRS is experiencing barriers to offering these options to Veterans because some BRS providers are not licensed independent providers, therefore cannot independently enter consults for community care.
- Workforce development: There is a shortage of providers in the CoC with certifications in Certified Low Vision Therapist (CLVT) and Computer Assistive Technology Instructor Specialist (CATIS).
- Workforce management: The Veterans Equitable Resource Allocation reimbursement classification change for Veterans with low vision will increase workload due to a patient roster that consolidates all levels of Veterans with a blind and low vision diagnosis. This results in an increase of the number of Veterans eligible for an annual visit.
- Emerging technology: Since the release of smartphones and tablets, Computer Access Training (CAT) Programs have become one of the primary referrals for BRS. The increasing use of portable electronic hand-held magnification devices will continue to replace outdated systems. Additionally, smart devices in the home environment that provide immediate access and communication represent another growing area of assistive technology.
- **Tele-rehabilitation:** To obtain and maintain competency to deliver telerehabilitation services, BRS providers must stay abreast of current technology, evidence, and education. BRS telehealth encounters in VA increased from 1,575 to 24,248 from 2019 to 2020.
- **Pandemic COVID-19 response:** BRS initiated procedures to ensure care continuity that included expansion of virtual care and self-care management protocols to maximize access to services. This has ensured that Veterans interfacing with BRS programs were afforded individual evaluation and treatment, with an emphasis on tracking medical diagnoses, prognosis, functional abilities, and goals.



2. Current State Overview

2.1 Demographic and Programmatic Distribution Analysis

Background

In 1944, President Roosevelt signed an executive order mandating that service members blinded during their World War II service would receive "adequate training to meet the problems of necessity imposed upon them by their blindness." This rehabilitative training was originally provided by the Army Medical Corps with responsibility transferring to VA in 1947. ⁷ VA's first inpatient Blind Rehabilitation Center (BRC) was founded in 1948 and has now grown to 13 BRCs, 52 outpatient clinics, 162 VIST coordinators and 99 Blind Rehabilitation Outpatient Specialists (BROS) throughout the United States. ⁶

In 2002, VA formed the Visually Impaired Advisory Board to examine expanding the Blind Rehabilitation CoC to patients with low vision who are not yet severely disabled. Based on the Visually Impaired Advisory Board's recommendations, VA significantly expanded services in 2008 with the establishment of 55 new outpatient low vision clinics tiered into varying levels of care. ² This tiered model includes outpatient and inpatient options and was designed to address Veterans' fluid treatment needs earlier in the CoC as well as to reduce travel burden.

Eligibility and Reliance

In the United States, the clinical definition of legal blindness is a visual acuity of 20/200 or less in the better-seeing eye with the best conventional correction or a visual field of 20 degrees or less in the better-seeing eye. ⁸ The World Health Organization (WHO) uses the following classifications of visual impairment. ⁸

- Moderate visual impairment/moderate low vision: 20/70 to 20/160 in the better eye with the best possible glasses correction.
- Severe visual impairment/severe low vision: 20/200 or worse in the better eye with the best possible glasses correction.
- **Profound visual impairment/profound low vision:** 20/500 to 20/1000 in the better eye with the best possible glasses correction.
- **Near-total visual impairment/near-total low vision**: 20/1000 in the better eye with the best possible glasses correction.

The eligibility of Veterans to receive BRS care is determined by the review of three key criteria: ¹ (1) whether the Veteran is eligible for VA health benefits (or is an active duty Service member), (2) whether the Veteran possesses a visual impairment and (3) whether the Veteran has received a designation of excess disability. After it has been established that the first criterion has been satisfied, the Veteran must then satisfy



either criterion two or criterion three to qualify for rehabilitative care within the BRS CoC. ¹ VHA definitions of visual impairment are defined in Appendix E. ¹

Given inpatient blind rehabilitation services in the community are not reimbursable by Centers for Medicare and Medicaid Services (CMS) and there are no comprehensive inpatient equivalents in the community, BRS reliance for services at VA is 100%, as enrollees have no means of obtaining such specific services elsewhere.⁹

Service Drivers and Disease Burden

The Center for Disease Control (CDC) defines vision loss as a public health problem due to the number of people affected, the effect on other public health measures (for example, morbidity, quality of life, cost), and growth rate. ¹⁰

- An estimated 3.4 million Americans aged 40 years and older meet the criteria for blindness or low vision and a total of 80 million Americans have eye diseases that are potentially blinding if not treated. ¹¹ BRS, alone, treated nearly 100,000 Veterans with low vision and blindness in FY 2020. ⁶
- Vision loss can hinder many other areas of life including socialization, mobility, and ability to work. People with vision loss report higher levels of diabetes, stroke, falls, depression, hearing impairment, falls, and premature death. ¹¹
- The leading causes of blindness and low vision in the U.S. are age-related conditions including diabetes, macular degeneration, diabetic retinopathy, cataracts, and glaucoma. ¹² As the population ages and the number of people with diabetes increases, this will drive continued long-term growth in blindness and low vision. Current estimates project blindness and low vision will double by 2030. ¹¹ Figure 1 below shows these projections.



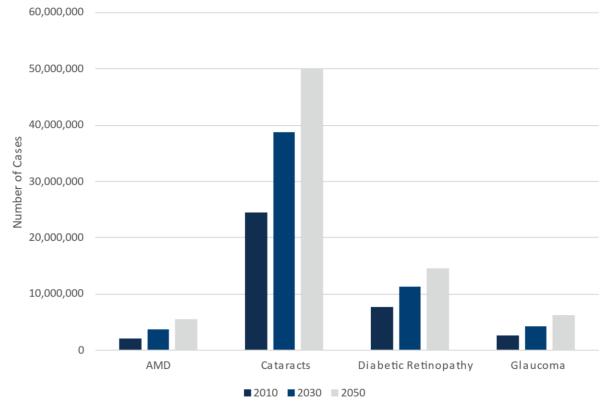


Figure 1: Eye Conditions and Disease Projections (2010-2050)

Source: National Institute of Health's National Eye Institute

Age-Related Macular Degeneration (AMD)

AMD is the leading cause of low vision in the U.S., causing more cases of vision loss than glaucoma and cataracts combined. ¹³ It does not cause blindness but it does result in central vision loss which impairs facial recognition, driving, and close-up work such as cooking and reading. Macular degeneration is idiopathic and untreatable, however with adequate treatment, progression can be delayed. The main risk factor is age with most cases occurring in those older than 55. Other leading risk factors include a family history of macular degeneration, Caucasian race, and smoking. ¹⁴ From 2010 to 2050, the National Eye Institute estimates the number of total number of people in the U.S. with AMD will increase from 2.07 million to 5.44 million (+163%). ¹⁵ In FY 2019, 43.4% of Veterans seen in BRS programs had macular degeneration as their primary diagnosis of vision loss. ⁶



Cataracts

A cataract is a clouding of the eye lens causing blurred, hazy vision and color loss. Like AMD, cataracts are age-related, with prevalence rates progressively increasing after age 40. More than half of people in the U.S. over the age of 80 either have cataracts or have had surgery to remove them. Less severe cases are often treated with optical aides and activity modification while surgery can treat more severe cases. Though surgery is effective and widely available, insurance coverage, lack of patient awareness, treatment costs, and patient choice are all barriers to care. ¹⁶ From 2010 to 2015, the National Eye Institute estimates the total number of people in the U.S. with cataracts will increase from 24.4 million to 50.2 million. ¹⁷

Diabetic Retinopathy

Diabetic Retinopathy is a common complication of diabetic hyperglycemia which affects the blood vessels of the retina, initially causing blurry vision and floating spot and eventually blindness if not treated. It is the leading cause of blindness among American adults age 20-74 years. Treatment includes managing the underlying diabetes to slow disease progression as well as pharmacological, laser, and surgical treatments. From 2010 to 2015, the National Eye Institute estimates the total number of people in the U.S. with diabetic retinopathy will increase from 7.7 million to 14.6 million. ¹⁸ In FY 2019, 9.3% of Veterans seen in BRS programs had diabetic retinopathy as their primary diagnosis for vision loss. ⁶

Glaucoma

Glaucoma is a group of eye diseases – the most common type being open-angle glaucoma - that damage the optic nerve, leading to initial peripheral vision loss and eventual blindness if not treated. Glaucoma is not curable, but disease progression can be slowed or stopped with treatments including medications, laser treatments, and surgery. From 2010 to 2015, the National Eye Institute estimates the total number of people in the U.S. with glaucoma will increase from 2.7 million to 6.3 million. ¹⁹ In FY 2019, 18.7% of Veterans seen in BRS programs had glaucoma as their primary diagnosis vision loss. ⁶



Demographics

Age and Utilization Trends

Increasing age is a driver of the diseases that cause the majority of visual impairments, as described previously. In the overall U.S. population, both the 65-84 and 85+ agegroups are projected to grow through 2025, as shown in Table 1.

Age Group	2020 General Population	2025 General Population	5-Year Change
<45	191,508,356	193,859,924	1.2%
45-64	83,868,948	83,481,915	-0.5%
65-84	48,380,432	56,796,057	17.4%
85+	6,584,557	6,994,842	6.2%

Table 1: U.S. Population Current and Projected Growth by Age Group

Source: IBM Market Expert

Base year (BY) 2017 10-year enrolled growth projections for the 65-84 and 85+ Veteran age groups project a 4.5% combined increase while 20-year projections indicate a combined decrease of 5.6%.VA current and projected enrollee growth by age group is found in Table 2 below.

ble 2: VA Current and Projected Enrollee Growth by Age Group
--

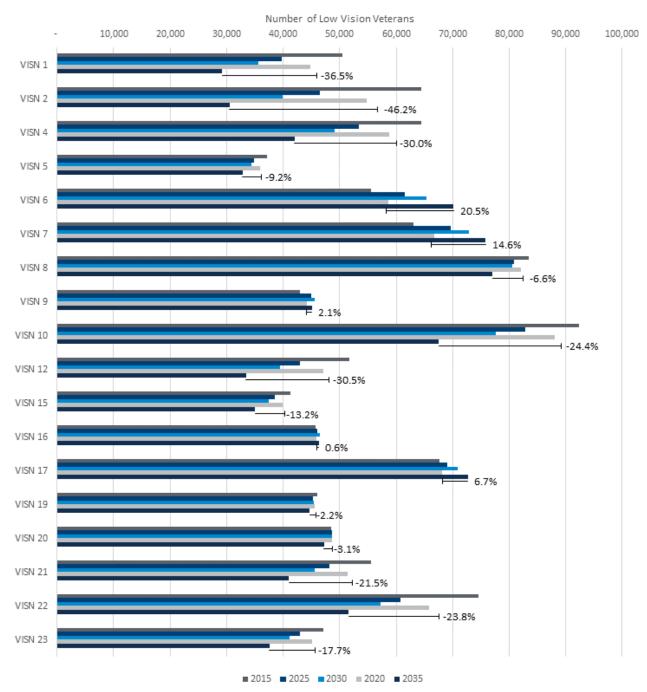
Age Group	FY 2017 Veteran Enrollment	FY 2027 Veteran Enrollment	FY 2037 Veteran Enrollment	10 Year Change	20 Year Change
<45	1,858,879	1,815,059	1,341,249	-2.0%	-28.0%
45-64	2,715,196	2,713,967	2,977,240	0.0%	10.0%
65-84	3,561,515	3,792,060	2,876,363	6.0%	-19.0%
85+	635,343	592,529	1,083,670	-7.0%	71.0%

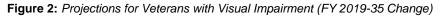
Source: Department of Veterans Affairs EHCPM 2018

Veteran Geographic Migration Projections

Per the Blind Rehabilitation National Program Office Projection Model shown in Figure 2, there were 1,032,050 Veterans with visual impairment in 2015. ²⁰ This is projected to decrease to 879,767 (-15%) by FY 2035. However, growth and decline patterns vary significantly by region based on differences in underlying demographics as well as population migration trends. Greater than 10% growth is projected in VISNs 6, 7, and 17 by FY 2035, whereas greater than 20% decline is projected in VISNs 1, 2, 4,10, 11, 12, 21, and 22 by FY 2035. ²⁰







Source: Blind Rehabilitation Service National Program Office, VI LB Projections, 2020



BRS Demographics

In FY 2020, BRS provided care and services to 98,510 Veterans. Among this group of Veterans seen in BRS programs: ⁶

- 94.6% Men, 5.4% Women
- 70.5% White, 29.5% non-White
- 72.7% resided in urban areas, 27.3% in rural locations
- 81.5% 65 years of age or older
- 41.8% Vietnam Era Period of Service
- 17.6% Korea Era Period of Service
- 11.3% Persian Gulf Era or were Active Duty
- 10.3% World War II Era Period of Service

Women Veteran Population

In FY 2020, approximately 94% of Veterans discharged from the BRS CoC were male, and 6% were women, but all BRCs need to be designed to accommodate the women Veteran population, with amenities such as single bathrooms attached to single occupancy rooms. ²¹ Women Veterans are the fastest growing sub-population of the military and Veteran communities. Women account for 10% of the current Veteran population and 15% of today's active duty military. As of 2015, women made up 12.3% of Post 9/11 Veterans. Overall rates of eye disorders among women Veterans have increased from 8.7% to 16.5% between FY 2000 and FY 2015, and rates of blindness and low vision have increased from 0.8% to 1.2% during the same time period. ²²

Unique Veteran Challenges/Co-Morbidities

Vietnam, Korea, and World War II era Veterans are aging and have increased care acuity needs. Most BRS patients are geriatric males with an average age of 69.8, and have co-morbidities such as falls risk, diabetes, neurological concerns, and pulmonary issues. ²¹ This highlights the importance of co-locating BRS programs with other medical and psychosocial services.

Priority Groups

Figure 3 reflects the priority groups that each Veteran utilizing BRS served, as well as their corresponding age. Priority groups range from 1 (highest) to 8 (lowest) and are based on service history, disability rating, income level, Medicaid qualification, and other VA benefits being received. ²³The most common priority groups were 1 and 4 for age group 65 to 84 years old.





Figure 3: BRS Demographics by Priority Group and Age

Source: Department of Veterans Affairs EHCPM 2020

Blind Rehabilitation and VA's Fourth Mission⁶

In partnership with VHA national and local leadership and all field-based programs providing BRS rehabilitation training, BRS initiated mitigation strategies to ensure the safety and well-being of all Veterans and staff within BRS. These efforts included expansion of virtual care and treatment modalities within BRS to maximize access to services while minimizing risks. A comprehensive self-care management protocol was adopted in BRS to help ensure that Veterans receive individual evaluation and treatment, with an emphasis on tracking medical diagnoses, prognosis, functional abilities, and goals.

COVID-19 has changed the way BRS provides care. Since March 2020, BRS programs experienced various levels of closures due to the COVID-19 pandemic. BRCs discharged all Veterans from inpatient care by April 2020, allowing inpatient clinicians to provide care and services through outpatient clinics and virtual care delivery modalities. The adoption of alternative care modalities allowed all BRS programs to continue providing blind rehabilitation services during the pandemic.

To explore the feasibility of providing blind rehabilitation care coordination and services via virtual care modalities, the BRS National Program Office piloted a Virtual VIST Coordinator. This three-month pilot program proved to increase access to care for 157



Veterans with visual impairment and supports the development and sustainment of an expanded virtual workforce.

2.2 Current VA Program Review and Analysis

There are currently 13 BRCs providing inpatient care and 52 outpatient clinics divided into three levels of acuity: Intermediate Low Vision Clinics (ILVCs), Advanced Low Vision Clinics (ALVCs) and Visual Impairment Services Outpatient Rehab (VISOR) programs. Basic eye care services are included at all VA eye clinics and, except for VISNs 16 and 20, each VISN has both ILVCs and ALVCs. Every VISN without an inpatient BRC was provided funding for a high acuity VISOR program, except for VISN 9.²

VIST coordinators and BROS are vital positions in the CoC. VIST coordinators provide a model of lifetime care coordination service to eligible Veterans with a visual impairment by "assessing, coordinating and reviewing the Veteran's rehabilitation and adjustment needs, and determining and referring the type and intensity of services needed, based upon clinical judgement and the Veteran's goals." ¹ BROS provide blind and low vision services in an outpatient setting, inpatient setting, or home environment as deemed appropriate for clinical care. ¹ Both positions are described in more detail in the staffing section. There are currently 162 VIST Coordinators and 99 BROS in the CoC. ⁶

Table 3 describes each level of care for a Veteran with a visual impairment. Location details for each service are in Appendix D4 and BRS levels of care coordination are in Appendix G.¹

CoC Level	Acuity or Care Coordination Level	Counts	Description
Basic Low Vision Care	Basic/Moderate	101 VA facilities reported providing low vision services in FY 2018 ⁶	Care provided by an optometrist or ophthalmologist that includes evaluation for optical devices and basic environment adaptations, such as lighting and contrast adjustments.
VIST Coordinator	Implements care coordination levels of complex, moderate, basic or lifetime	162 across VA	Follows a model of lifetime care coordination and conducts a comprehensive evaluation of needs for all identified Veterans experiencing functional difficulty due to visual impairment.

Table 3: Blind Rehabilitation Service Continuum of Care¹



CoC Level	Acuity or Care Coordination Level	Counts	Description
BROS	Basic/Moderate	99 across VA	Provide a wide array of blind rehabilitation including assessments and therapeutic training in low vision, Activities of Daily Living/Instrumental Activities of Daily Living (ADL/IADL), Computer Assistive Technology (CAT) and Orientation and Mobility (O&M). Services are provided in outpatient clinics hospital, residential, community, workplace, and education settings.
ILVC	Moderate	21 clinics	Services provided by an eye care provider and low vision therapist working together in an interdisciplinary team to provide low vision care. There is a spectrum of low vision devices available for the Veteran's rehabilitation treatment plan.
ALVC	Moderate	22 clinics	Services provided by an eye care provider as well as blind rehabilitation specialists and other support services working together in an interdisciplinary team to provide low vision care. In addition to low vision care, O&M, CAT, ADL/IADL, assessment and training are also available. The difference between the ALVC and ILVC is specialized staffing. ²¹
VISOR	Complex	9 clinics	Services provided by an eye care provider as well as blind rehabilitation specialists and other support services working together in an interdisciplinary team to provide low vision care. In addition to low vision care, O&M, CAT, and ADL/IADL, assessment and training are also available. While in the VISOR Program, the VAMC may provide temporary lodging to those than can perform basic ADL independently, including the ability to self-medicate. VISOR programs may last up to 9 days.
IP BRC	Complex	13 BRCs	Provide intensive interdisciplinary rehabilitation to Veterans with visual impairment in a VA medical facility support system. Each Veteran with visual impairment receives an individualized treatment plan and therapeutic intrusion is provided on a one-on-one basis. Veterans admitted to BRC are considered inpatients of the VAMC.

In addition to the BROS and outpatient clinic services noted above, the Eye Care/Optometry service manages three Visual Impairment Center to Optimize



Remaining Site (VICTORS) programs placed in Palo Alto, CA, Northport, NY and Lake City, FL. Blind Rehabilitation does not have oversight of this program, though it does provide resource support to implement treatment plans post-eye appointment. ²¹ The VICTORS program is similar in scope to the ILVC. ²¹ Sections 4 and 5 discuss planning guidelines for inpatient BRCs, outpatient services, and supporting positions.

Blind and Low Vision Services

BRS provides a wide range of services across the CoC. Blind Rehabilitation services are delivered through interdisciplinary Blind Rehabilitation teams who work together to assess, plan, and implement the Veterans' treatment goals. Services include: ¹

a. Activities of Daily Living/Instrumental Activities of Daily Living. Activities of daily living/instrumental activities of daily living (ADL/IADL) is the therapeutic instructional area focused on fundamental skills that are required to independently care for oneself and those activities that allow an individual to live independently in a community. Living skills is the therapeutic instructional area focused on ADL and IADL areas of instruction.

b. **Computer Assistive Technology Training.** Computer assistive technology (CAT) training provides training in the use of specialized access technology devices necessary for a Veteran with visual impairment to independently operate computers, tablets, smartphones and other digital electronic devices to achieve their computing and communication goals.

c. **Low Vision Therapy.** Low vision therapy is the therapeutic instructional area focused on low vision instruction, low vision training, vision rehabilitation therapy and vision rehabilitation training.

d. **Manual Skills Training.** Manual skills training is the therapeutic instructional area focused on organization, tactual awareness, eye-hand coordination, spatial awareness, memory sequencing, problem solving and confidence building. Activities emphasize adaptive and safety techniques and range from basic and advanced tasks utilizing hand tools, ceramic equipment, power tools and woodworking machinery.

e. **Orientation and Mobility Training.** Orientation and mobility (O&M) training is the therapeutic instructional area that addresses establishing and maintaining one's orientation to the environment as well as safe, efficient and confident travel.

f. **Family Training Programs** allows a family member of caregiver to participate in the rehabilitation process for several days near the end of a Veteran's training program to better understand and support the patient's needs.

To supplement the core of BRS care, additional training programs and counseling services are offered including adjustment counseling, whole health education and counseling, specialized recreational therapy programs, consumer education, community and professional education, prosthetic issuance, and eye care services.¹



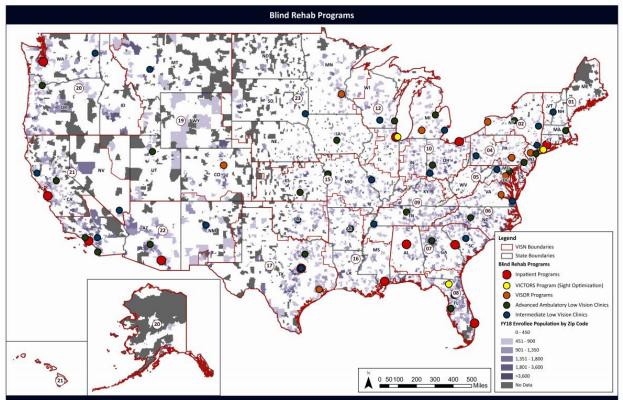
Network Distribution

The current network is designed so that each VISN has ILVCs and ALVCs, as well as an inpatient BRC or outpatient VISOR program in each VISN. Each VISN with a BRC has an ILVC and ALVC. For VISNs without a BRC, a VISOR program offering the highest level of outpatient care was placed in addition to an ILVC and ALVC. ²¹ VISNs 10 and 16 have both VISOR programs and BRCs. See Appendix D1 for BRS Services by VISN and Figure 4 for national BRS Locations. ¹

- There are between three and seven access points with services specifically for Veterans with visual impairment in each VISN.
- The 13 BRCs are located in 10 of the 18 VISNs with VISNs 7, 8, and 22 each having two BRCs. The majority of the Midwest including adjacent VISNs 15, 19, and 23 have no BRCs.
- VISNs 10 and 16 have both VISOR programs and BRCs.
- There is at least one ILVC and one ALVC in each VISN except for VISN 16 which has no ILVC but does have ALVC, VISOR, and BRC services.
- The three VICTORS programs are each located in different VISNs. Two of these VISNs also have BRCs and one VISN has an ALVC.
- There are 5 locations that have BRC/VISOR programs located at Polytrauma sites: Palo Alto (VISN 21, level 1 Polytrauma), Minneapolis (VISN 23), Tampa (VISN 8), San Antonio (VISN 17) and Richmond (VISN 6).²¹



Figure 4: Blind Rehabilitation Service Locations*



Source: FY 2020 Q1 VA Site Tracking System (VAST) *Map does not show current BRC in Puerto Rico and shows 3 VICTORS programs that are not part of the BRS CoC

BRC Capacity and Utilization

Nationally, the BRCs operate 243 out of 314 total authorized beds. They had a FY 2019 total ADC of 165.3 (68% occupancy) as seen in Figure 5. There is significant variation in bed count, ADC, and occupancy across BRCs, shown below and in Table 4:

- Bed count ranges from nine (American Lake BRC) to 31 (Tucson BRC) with an average number of beds of 16.2 and median of 15.
- ADC ranges from 4.6 (American Lake BRC) to 29.5 (Hines BRC).
- Occupancy rates range from 47% (Menlo Park BRC) to 91% (West Haven BRC).
- Average length of stay was 27.8 days in 2018 and 26.6 days in 2019. ⁶ Length of stay is determined by the Veteran's interdisciplinary care team based on individual needs.



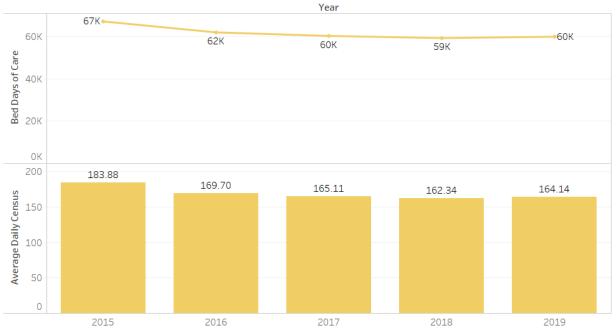


Figure 5: Blind Rehabilitation Bed Days of Care and Average Daily Census

Source: Department of Veterans Affairs, FY 2019 VISN Support Services Center Beds, PTF Cube

VISN	BRC VAMC	FY 2020 Operating Beds***	FY 2020 Authorized Beds	FY 2018 Bed Occupancy	FY 2019 Bed Occupancy	FY 2020 Q1 and Q2 Bed Occupancy
1	West Haven, CT**	10**	34	90.4%	91.5%	91.9%
7	Augusta, GA	15	15	71.4%	63.1%	63.6%
7	Birmingham, AL	20	20	72.0%	70.3%	49.4%
8	San Juan, PR	12	12	51.3%	48.6%	41.7%
8	West Palm Beach, FL	13	13	73.2%	77.1%	84.5%
10	Cleveland, OH	15	15	84.8%	82.9%	87.3%
12	Hines, IL	34	34	80.1%	86.9%	85.0%
16	Biloxi, MS	22	22	79.5%	82.5%	84.6%
17	Waco, TX	11	15	72.3%	64.5%	67.8%
20	American Lake, WA	9	15	56.9%	53.5%	48.0%
21	Palo Alto, CA*	27	64*	46.4%	47.5%	44. 6%
22	Long Beach, CA	24	24	52.8%	48.9%	47.3%
22	Tucson, AZ	31	31	59.8%	67.2%	69.1%

Table 4: FY 2019 ADC, Operating Beds, and Occupancy Rate by BRC

Source: Blind Rehabilitation Service National Program Office

*Due to construction in Palo Alto, 32 beds were temporarily added by VISN 21 in FY 2012 for Menlo Park 21



** Due to flood damage, operating beds at West Haven were decreased from 34 to 10 beds ²¹

***Operating bed count may include 1-2 family training rooms ²¹

BRC Referrals and Service Areas

BRCs operate in an informal regional system. Generally, Veterans are referred to care within their service area though they may be referred outside of the service area due to wait times; however, Veterans may choose to receive care in any location. Active duty personnel and patients at VA Polytrauma Rehabilitation Centers can be referred to BRCs based on their needs regardless of service area. After a Veteran has been deemed eligible for BRS care, a BRS provider creates an initial referral to the appropriate level of care within the CoC, based on the clinical examinations and determinations in the eligibility stage. ¹

Service Areas

In all BRCs, the majority of bed days of care (BDOC) in Table 5 below originate from within the VISN or an adjacent VISN. For example, the Augusta BRC in VISN 7 receives 79% of total BDOC from patients residing in VISN 7 or adjacent VISN 6. However, in some instances, patients are traveling considerable distances for care.

VISN	BRC Location	Total BDOC	% of BDOC Originating Within Same VISN	% of BDOC Originating from External VISN
1	West Haven, CT	3,031	32.3%	67.7%
7	Augusta Uptown, GA	3,255	49.3%	50.7%
7	Birmingham, AL	4,883	61.0%	39.0%
8	San Juan, PR	2,003	98.6%	1.4%
8	West Palm Beach, FL	3,304	89.6%	10.4%
10	Cleveland, OH	4,309	54.3%	45.7%
12	Hines, IL	9,507	29.7%	70.3%
16	Biloxi, MS	6,433	53.5%	46.5%
17	Waco, TX	2,475	82.7%	17.3%
20	American Lake, WA	1,592	84.4%	15.6%
21	Palo Alto, CA	4,384	74.8%	25.2%
22	Long Beach, CA	4,070	86.8%	13.2%
22	Tucson, AZ	7,106	52.5%	47.5%

 Table 5: Bed Days of Care by BRC Location (FY 2019)

Source: Department of Veterans Affairs, VISN Support Services Center Encounters Cube



Referrals

Table 6 details the disparity for the number of VIST Coordinators for each BRC location. This number varies from two (San Juan) to 27 VIST Coordinators (Hines). All VIST Coordinators can refer to any VISOR program, based on the Veteran's needs and programs offered.

VISN	BRC Location	Number of Referring VIST Coordinators
1	West Haven, CT	26
7	Augusta, GA	10
7	Birmingham, AL	9
8	San Juan, PR	2
8	West Palm Beach, FL	13
10	Cleveland, OH	19
12	Hines, IL	27
16	Biloxi, MS	13
17	Waco, TX	5
20	American Lake, WA	10
21	Palo Alto, CA	7
22	Long Beach, CA	6
22	Tucson, AZ	14

Table 6: VIST Referral Counts by BRC Location

Source: Blind Rehabilitation Service National Program Office

BRC Access and Wait Times

Variations in BRC referral patterns, populations served, and capacity has led to significant variation in wait times for admission. The waiting time for admission to a BRC is defined as the number of days between the date a referral is received at a BRC and the actual admission date of the applicant. ⁶ The FY 2019 wait time goal was less than 60 days, with an actual average of 66.9 days for all 13 BRCs. In FY 2020 the wait time goal changed to 28 days or less, but up to 60 days for Veterans' preference. ⁶ In the first two quarters of FY 2020, the actual average wait time was 56 days. ⁶ The disparity of VIST coordinator placement and referral patterns can further influence wait times, and additional points of access may be beneficial close to BRCs that are functioning at capacity to alleviate access burden. ²¹



FY 2019 BRC Discharges	Number of Discharges	Avg. Wait Times (Days)
American Lake, WA	54	91.9
Augusta, GA	118	82.6
Biloxi, MS	222	89.6
Birmingham, AL	202	79.1
Cleveland, OH	225	40.1
Hines, IL	319	109.9
Long Beach, CA	188	29.5
Palo Alto, CA	202	46.1
San Juan, PR	163	45.7
Tucson, AZ	312	26.0
Waco, TX	132	80.8
West Haven, CT	90	127.1
West Palm Beach, FL	204	75.1
Grand Total	2431	66.9

Table 7: BRC Wait Times by Discharged Veterans in FY 2019

Source: Blind Rehabilitation Service National Program Office, BR 5.0 National Database

Table 8: BRC Wait Times by Discharged Veterans in Q1/Q2 FY 2020

FY 2020 Q1/Q2 BRC Discharges	Number of Discharges	Avg. Wait Times (Days)
American Lake, WA	23	19.8
Augusta, GA	72	102.5
Biloxi, MS	128	58.7
Birmingham, AL	83	38.1
Cleveland, OH	118	80.5
Hines, IL	156	82.2
Long Beach, CA	91	21.3
Palo Alto, CA	103	36.7
San Juan, PR	66	39.1
Tucson, AZ	162	25.8
Waco, TX	65	33.1
West Haven, CT	43	111.3
West Palm Beach, FL	99	76.6
Grand Total	1209	56.1

Source: Blind Rehabilitation Service National Program Office, BR 5.0 National Database

Key Metrics

BRS track several measures in access, workload productivity, telehealth, and Veteran experience. Veteran experience is measured through the Universal Stakeholder



Participation Questionnaire (uSPEQ). ²⁴ Key performance indicators for FY 2020-21 include: ⁶

- **BRC Wait time**: Admissions to a BRC will not exceed a wait time of 28 days, up to 60 days to accommodate for Veterans' preference.
- **BRC Occupancy Rate:** BRC occupancy rate of 80% or greater.
- VIST Annual Reviews: 90% of Veterans on a VIST Roster will be offered an annual review.
- VISOR Appointments: 90% of appointments will be scheduled within 30 days of Veterans' preferred date.
- Workload Productivity: 75% BRS clinician workload productivity will fall into the inner-quartile range, with expectation of 50th percentile or higher and stretch goal of 75th percentile.
- **Telehealth:** Increase VIST Coordinator and BROS telehealth capability by 20% from the previous year. Increase telehealth encounters by 20% from the previous year and increase the number of unique Veterans receiving VA Video Connect (VVC) by 5% from the previous year.
- **uSPEQ:** All BRCs and VISORs will achieve 90% (agree, strongly agree) on USPEQ question 5.4, Services enabled me to do things better.

Staffing

The minimum Blind Rehabilitation staffing needed to provide basic low vision care includes the VIST Coordinator, BROS, and Low Vision Optometrist that are further defined below. ²¹

VIST Coordinator: The VIST Coordinator provides lifetime care coordination services to eligible Veterans with visual impairment. The VIST Coordinator is often the entry point into the CoC for Veterans with visual impairments. Duties include identifying eligible Veterans with a visual impairment, coordinating referrals to the appropriate intensity of services needed, arranging appropriate rehabilitation services and devices, and providing professional counseling or conducting educational programs. ¹ Specific VIST Coordinator staffing guidelines and Veteran roster workloads are described in Appendix F. ¹

Blind Rehabilitation Specialist or Outpatient Specialist (BRS or BROS): BRS or BROS provide a wide array of blind rehabilitation including assessments and therapeutic training in low vision, ADL/IADL, CAT and O&M. Their full scope of responsibilities includes adjustment counseling, assessment, goal development and treatment plan, therapeutic instruction, coordinating care, and documenting care. ¹ **Low Vision Optometrist:** Although a supporting service and not formally under BRS, an essential element in vision rehabilitation is the active participation by Low Vision Optometrists. Inpatient BRCs with 16 or more operating beds will have a 1.0 full-time equivalent (FTE) residency trained Low Vision Optometrist or an optometrist with



equivalent experience serving those Veterans. Inpatient BRCs with 15 or fewer operating beds must be assigned a 0.5 FTE residency-trained Low Vision Optometrist or an optometrist with equivalent experience. When outpatient care is provided in addition to inpatient BRC care, an additional 0.5 FTE residency trained Low Vision Optometrist, or an optometrist with equivalent experience, must be available to serve those Veterans.¹

In addition to the minimum staffing required to provide basic low vision services, inpatient Blind Rehabilitation Center staffing is also composed of: ¹

- Blind Rehabilitation Service Chief (BRC Chief)
- Blind Rehabilitation Center Assistant Chief
- Blind Rehabilitation Specialist
- Clinical Psychologist
- Social Worker
- Recreational Therapist
- Medical support services by physicians, advanced practice providers and rehabilitation nursing staff

Table 9 provides staffing descriptions for each level of the BRS CoC.¹

 Table 9: BRC CoC Staffing Matrix 1

Inpatient BRC	Staffing ≤15 Beds	Staffing ≥16 Beds
	 1.0 BRC Chief 2.0 FTE Supervisory BRS 1.0 BRS Admission Coordinator 	 1.0 BRC Chief 1.0 BRC Assistant Chief 4.0 FTE Supervisory BRS 1.0 BRS Admission Coordinator
	 To operate at full capacity there should be a BRS per patient bed ratio of one-to-one. Core interdisciplinary team includes a physician or advanced practice provider, nurses, a psychologist, a social worker, a recreational therapist, an optometrist, a dietitian, and a chaplain. 	

BRS Outpatient Clinics	Staffing	
ILVC	 1.0 FTE BRS (low vision therapist) 0.5 FTE Eye Care Provider 0.5 FTE Program Assistant 	
ALVC	 2.0 FTE BRS (low vision therapist and O&M therapist) 0.5 FTE Eye Care Provider 0.5 FTE program assistant 	
VISOR	 1.0 FTE VISOR Chief 4.0 BRS (low vision therapists, O&M therapists, living skills therapists) 0.5 FTE Eye Care Provider 0.5 FTE Program Assistant 	



2.3 Commercial and other Federal Provider Trends

Model of Vision Rehabilitation

Vision rehabilitation services vary across the United States and around the world. The spectrum ranges from a single clinician incorporating low vision devices into the clinical practice to larger multidisciplinary teams offering a full range of comprehensive rehabilitation services in a single setting. ²⁵ The American Academy of Ophthalmology (AAO) developed a three-level Model of Vision Rehabilitation that outlines how vision rehabilitation can be incorporated in the continuum of ophthalmic care. ²⁵ WHO also categorizes low vision services in three similar tiers of acuity. ²⁶ VA BRS, which serves the unique needs of Veterans, is a leader in these industry models in their scope and reach of services. Table 10 illustrates these models of visual rehabilitation.

WHO Levels of Care ²⁶	AAO Model of Vision Rehabilitation ²⁵	VA BRS Model	Services
Primary: First point of contact and referral link to specialized care	Level 1: Recognizing and Responding to Patients with Vision Loss	 Basic Eye Clinic VIST Coordinator BROS 	 Basic visual screening/assessment Provide resources for non- optical devices Provide resources/referral for vision loss/early intervention
Secondary: Services provided by specialists and other health professionals	Level 2: Vision Rehabilitation Services	 Intermediate Low Vision Clinic Advanced Low Vision Eye Clinic VIST Coordinator BROS 	 Advanced eye assessment Training on a combination of the following: low vision aids, ADL, assistive technologies, psychosocial support, braille instruction, vocational counseling
Tertiary: Based at national level and provided in a hospital setting. Includes comprehensive vision rehabilitation, research, program development, staff training, advocacy, and data collection	Level 3: Comprehensive Multidisciplinary Vision Rehabilitation	 VISOR program Inpatient BRC VIST Coordinator BROS 	 Advanced eye assessments Customized training on all of the following: low vision devices, visual skills, assistive technology, O&M, ADL, Braille instruction, vocational counselling, case management

Table 10: Vision Rehabilitation Models of Care



Programs and Services

Low vision service programs in the United States range from comprehensive low vision rehabilitation services to specific and select services in employment/ professional training, recreation, support groups, transportation, O&M, library/reading, dog guide training, ADL, CAT, community outreach, assistive products, and so forth. ²⁷ Other than VA BRS program, variations of these visual rehabilitation services are primarily offered in three different sponsored settings, listed below. Detailed examples of these affiliations are in Section 3, Table 11.

- Academic Medical Center (AMC)/Health System: Outpatient low vision clinics (staffed by ophthalmologists, optometrists, and rehabilitation therapists) provide low vision assessments and provide resources/training on low vision aids and adaptive technology. Some clinics may offer a broader range of services to include O&M, ADL, and support counselling. The Johns Hopkins Wilmer Eye Institute, Bascom Palmer Eye Institute, Wills Eye Hospital, Henry Ford Health System, and Berkeley College of Optometry are some examples of AMC/Health Systems that provide these low vision services.
- **Private Non-Profits**: Outpatient or home-based select services to provide employment/job training, travel and O&M training, Braille instruction, dog guide training, and low vision device training. Select programs may also offer community outreach programs, support groups, recreation services, library and radio reading services, and informational/resource referrals. Examples of these organizations use the name Lighthouse, although the various Lighthouse organizations around the US (such as Miami Lighthouse for the Blind and Visually Impaired, Lighthouse Guild of New York, Chicago Lighthouse) are not typically related at the organizational level. ²⁸
- State Government Programs: Full spectrum of residential or outpatient rehabilitation services with the focus of achieving optimal vocational, educational, and social independence. For example, the Virginia Rehabilitation Center for the Blind and Vision Impaired provides six to nine-month residential course offerings in O&M, ADL, Braille instruction, CAT, and conversations about blindness. Each student is assigned a case manager to navigate them through residential training and assist in coordinating community-based services. ²⁹

Industry Challenges

A global survey to assess the barriers to low vision services reported that lack of triage to intensive rehabilitation, lack of training funding, fragmented data collection, and inadequate awareness were the three main obstacles to using low vision services worldwide. ²⁶ In a cross-sectional study, 702 low vision patients underwent structured interviews to assess patient demographics. Among these patients, only 54% had used low vision services, 33% had never heard of vision rehabilitation or were never referred, and 13% knew of the services but did not use them. ²⁸



Quality

The most comprehensive systematic review of the effectiveness of low vision services examined 58 studies that met inclusion criteria, including only seven randomized controlled trials (RCTs). ³⁰ The reviewers noted several key points regarding the overall body of research and outcome measures and synthesizing the available evidence: ³⁰

- Overall, there is a paucity of high-quality research in the low vision space, particularly RCTs.
- There is little standardization of outcome measures. In the studies evaluated, 47 different outcome measures were used, making cross-study comparison challenging. Further, the outcome measures used spanned a wide range of areas including:
 - **Objective/clinical measures** that assess visual acuity, reading speed and accuracy
 - Functional measures that assess the ability to perform ADLs and IADLs
 - Vision-related quality of life measures that assess the effect of visual disability on a range of functional, social, and psychological areas
 - Psychological status measures that assess both general mental health and psychological adjustment to vision loss
 - **General health-related quality of life measures** that assess overall perceptions of health status, not specifically related to vision loss
- Evidence supported by well-designed RCTs shows that low vision services have a positive effect on clinically measured visual function including areas such as far and near acuity. VA's interdisciplinary outpatient programs were cited as an example of a program with large improvements in visual function outcomes.
- Low vision services improve overall function, including the ability to perform ADLs and overall activity levels.
- There is insufficient evidence to conclude there are significant positive effects from low vision services on mood or overall quality of life. However, VA inpatient and group intervention models were noted as programs that have demonstrated the largest effects.
- Treatment "dose" as measured in total hours and the effect size of outcomes have a positive relationship. Large positive effects were noted for VA and other high-intensity services.



3. Leading Practices

3.1 Leading Practices Analysis

BRS is unique in both scope (inpatient and outpatient multi-disciplinary services and lifetime care coordination) and reach (national distribution) compared to other low vision services and programs across the country, and its comprehensive nature is not duplicated in the private sector. A 2015 WHO report on International Standards for Vision Rehabilitation stated that "VA, which triages and matches individuals to the intensity of multidisciplinary rehabilitation service required, is an excellent model of care." ²⁶ Although not comparable to the lifetime care model and comprehensive services offered by VA, there are some AMC, non-profit organizations, and state programs that provide components of low vision services.

Table 11 details examples of low vision/visual rehabilitation programs across the country in each provider affiliation.

Program	Affiliation	Setting	Providers	Description/Services
Lions Low Vision and Vision Rehabilitation Center- Wilmer Eye Institute (Johns Hopkins) ³¹	AMC/Non- Profit Partners	Outpatient	Optometrist, OTs, and other rehab therapists within an eye department of 60 full-time faculty	Partnered with Lions Vision Research Foundation for \$4 million endowment, annual fellowship, and program to match patients with services. ³²
Low Vision Clinic and SF Lighthouse for Blind and Visually Impaired (University of California Berkeley School of Optometry) ³³	AMC/Non- Profit Partners	Outpatient	Optometrists and optometry residents; OTs and other rehab therapists	Lighthouse's flagship program is the Changing Vision, Changing Life (CVCL) immersion program for O&M, ADL, and Braille.
Lighthouse Low Vision Services (multiple locations/affiliations across the country) • Lighthouse Guild (New York) ³⁴ • The Chicago Lighthouse ³⁵ • Miami Lighthouse for the Blind and Visually Impaired ³⁶	Non-Profit	Outpatient and home care	Optometrist, OTs, O&M instructors	Services offered include, low visions assessments, behavioral health, support groups, CAT, ADL, and vocational/employment services. Lighthouse affiliations also provide optometry post- graduate training programs in Low Vision. Miami Lighthouse FY 2019 participants statistics include: ³⁶

Table 11: Examples of Providers of Low Vision Services



Program	Affiliation	Setting	Providers	Description/Services
 SF Lighthouse for the Blind and Visually Impaired ³⁷ 				 6.411 participants in "Living with Low Vision" community presentations 1,421 Vision Solutions Center clients 233 senior low vision exams 246 patients received vision rehab services from certified OTs
Henry Ford Center for Vision Rehabilitation and Research ³⁸	AMC	Outpatient	Ophthalmologist, Optometrist, OTs	Comprehensive low vision evaluation by ophthalmologist and certified low vision optometrist, and individualized rehabilitation with an OT to include low vision device training/selection, strategies to maximize use of residual vision, introduction to community/national resources, and training on environmental adaptations.
Wills Eye Hospital Low Vision Service ³⁹	Health System	Outpatient	Optometrists	The program provides a combination of special optics and re-training of the visual system for "reverse scan" reading, with a special emphasis on Age Related Macular Degeneration.
Virginia Department of Blind and Visually Impaired (DBVI)- Virginia Rehab Center for the Blind and Vision Impaired 29	State	Residential and/or outpatient	Counselors, Therapists, Case Managers, Health Educators. (No medical provider on-site)	Tailored services/training in independent living skills, communication, orientation and travel, social and recreational development, counseling, medical information/self- management, vocational evaluations, and assistive technology.

Visual Impairment Training, Certifications, Accreditation and Research

Vision Rehabilitation Workforce Development

The mission of the Academy for Certification of Vision Rehabilitation and Education Professionals (ACVREP), founded in 2000, is to advance professional competency so all people with visual impairment receive services from highly qualified professionals. ACVREP's certification programs for Vision Impairment Specialists are designed to offer



professionals the means to demonstrate critical knowledge and skills that promote the provision of quality services and ethical practice. ACVREP offers the following certifications: ⁴⁰

- Certified Low Vision Therapist
- Certified Orientation and Mobility Specialist
- Certified Vision Rehabilitation Therapist
- Certified Assistive Technology Instructional Specialist

VA implemented the Visual Impairment Orientation and Mobility Professionals Scholarship Program to develop young professionals entering the field. Since the implementation of Visual Impairment Orientation and Mobility Professionals Scholarship Program in 2015, BRS has provided 33 graduate training scholarships to help provide a supply of future professionals available to enter the specialty of Blind Rehabilitation.⁶

Low Vision Eye Care Training

A handful of Optometry schools also offer a Low Vision Rehabilitation residency, an intensive one-year educational program for a qualified graduate optometrist to provide the individual with advanced and concentrated clinical and didactic experience in all aspects of low vision rehabilitation. ⁴¹ Examples of these optometry residencies include:

- The Eye Institute of the Pennsylvania College of Optometry at Salus University
- Illinois College of Optometry
- Berkeley School of Optometry
- State University of New York College of Optometry
- Oregon Health and Science University Casey Eye Institute

The Johns Hopkins Wilmer Eye Institute offers a one-year postdoctoral Vision Rehabilitation Fellowship to train ophthalmologists and optometrists to become experts in clinical vision rehabilitation and related clinical science and research. The Wilmer Eye Institute has three full time research faculty focusing on the following areas: ⁴²

- Vision Rehabilitation Outcomes
- Technology Applications in Vision Rehabilitation
- Effects of Low Vision on Patients
- Retinitis Pigmentosa
- Ultra-low Vision
- Prosthetic Vision

Accreditation

The Commission on Accreditation of Rehabilitation Facilities International (CARF) is a non-profit that accredits rehabilitation programs, including vision rehabilitation services programs. ⁴³ The mission of CARF is to promote the quality, value, and optimal outcomes of services through a consultative accreditation process and continuous



improvement services that center on enhancing the lives of persons served. ⁴³ It is the responsibility of the BRCs and outpatient clinics to maintain CARF accreditation and all BRS programs must assure that applicable regulatory standards by The Joint Commission (TJC) are being met. ¹

Growth of Outpatient Services

BRS programs provide a model of care that extends from the Veteran's community home environment to the local VHA care site, ALVCs and ILVCs, VISOR outpatient programs and inpatient BRC programs. ⁶ Several factors are driving a growth in outpatient services including: an increase in tele-health; emergent needs addressed at outpatient clinics; the expansion of BROS services into the home; serial rehabilitation, and emerging technology. ⁶ The increasing use of portable and smart devices in the home environment necessitate home or outpatient training and help provide immediate access and communication. ⁶

Preventative Care Measures

Studies have validated the importance of early referral to a low vision specialist. An earlier referral provides more time for patients to develop a relationship with the low vision team, which can lead to a better understanding of which interventions are best for the patient. An RCT with 323 Veterans with macular diseases and best corrected distance visual acuity better-eye of 20/50 to 20/200, was conducted to determine the value of adding low vision rehabilitation with a therapist compared with low vision services without intervention. The RCT concluded that both basic low vision and low vision rehabilitation were effective, but the added low vision rehabilitation increased the effect only for patients with best corrected distance visual acuity better-eye worse than 20/63 to 20/200. Basic low vision services may be adequate for most low vision patients with mild visual impairment. ⁴⁴

A clinical guide from the journal Therapeutic Advances in Ophthalmology states that, for low vision services, clinicians should not let active ophthalmologic treatment, such as anti-vascular endothelial growth factor therapy, delay referral to low vision rehabilitation. A possible reason cited for delayed referral was waiting to see what the final visual acuity of the patient would be once therapy was complete. However, because patients may struggle with functional vision even while receiving therapy, referral to low vision professionals for evaluation should not be delayed. ²⁸

Telehealth and Teleretinal Imaging (TRI)

As the U.S. health care system continues to evolve, telehealth continues to be at the forefront and virtual visits are becoming as commonplace as in-person visits. The expected benefit of Blind tele-rehabilitation is increased clinical capacity, resulting in improved access closer to the Veteran's home. An increase in the utilization tele-rehabilitation as a viable platform and alternative for face-to-face clinical care has been demonstrated in past years and represents a new mechanism to improve timeliness and



access to BRS programs. ⁶ BRS tele-rehabilitation encounters increased from 1,575 in 2019 to 24,248 in 2020 (+1440%). ⁶

The field of Optometry has embraced telehealth by implementing teleretinal screening for diabetic patients. Teleretinal screening programs are applied throughout VA, the Joslin Vision Network, and via web- based applications such as the Eye Picture Archive Communication System.⁴⁵ Due to the high prevalence of the diabetes in the U.S., the American Diabetes Association recommends annual retinal exams, as early intervention of diabetic retinopathy can lead to favorable visual outcomes. However, despite the recommendation, only 60% of patients of diabetic patients have their eyes examined regularly.⁴⁵ The goal of TRI is to screen for vision-threatening diabetic retinopathy and allow timely treatment. TRI can also reduce the risk of vision loss from diabetic macular edema and proliferative neovascularization.⁴⁵ The TRI procedure consists of retinal images that can be remotely reviewed by a certified optometrist or ophthalmologist who grades the level of retinopathy based on the Early Treatment Diabetic Retinopathy Study guidelines. TRI has been valuable in VA and other health systems where patients must travel long distances for an ocular exam due to the large geographic area with rural locations. ⁴⁵ Several cohort studies have found that approx. 25%-43% of patients screening through TRI are referred for additional eye care. The most common reasons for referral are diabetic eye disease (43.2%), optic nerve related disease (30.8%), lens opacities (19.1%), and age related macular degeneration (12.9%).⁴⁶



4. Service Planning Framework

4.1 Program Priorities

The key program priorities that have guided the development of planning guidelines and thresholds for the BRS CoC include: addressing resource allocation across changing Veteran demographics; improving timely access to care; addressing the increasing demand for outpatient services; exploring greater application of telehealth services; accommodating the growing needs of women Veterans; and standardizing the referral pathway.⁶

Addressing Veteran Geographical Distribution and Optimizing Resource Allocation

There are variations in resources available within a VISN or region, both within BRS and with key supporting services such as Eye Care. There are also shifts occurring in the demographics of Veterans with visual impairment, with varying rates of projected growth or decline by VISN. Aligning resources throughout the CoC to match these demographic shifts is a key priority and will improve access to services for a greater number of Veterans. ⁶

Standardizing Referral Pathways

Referral management and placement of VIST coordinators are uneven, contributing to disparities in facility utilization and wait times. ⁶ Improving the referral pathway will ensure optimal utilization of resources across the entire CoC.

Improving Timely Access to Care

Wait times are longer than desired for various BRS CoC programs due to varying levels of regional or VISN resources, uneven referral patterns, and some programs not located close to where Veterans live. ⁶ Redistributing VISN resources closer to where Veterans live, optimizing VISN resources, and improving referral pathways will improve Veteran access to care.

Addressing Growth of Demand for Outpatient Services, Services for Women Veterans, and Telehealth

There are shifts in demand toward low vision and outpatient services due to medical advances and earlier treatment to slow disease progression. These outpatient services should be situated near population centers for maximum access. Another key demographic shift is the increase in the number of women Veterans that will involve changes in inpatient facility design. Similarly, telehealth utilization in BRS has grown exponentially in the last year and will play a key role in future delivery of rehabilitation services. ⁶ Addressing these issues will improve access and quality of care.

Other important program priorities and challenges are described in more detail in Section 1.1, and include: ⁶



- Standardization of BRS program governance structure
- Workforce development and management
- Electronic health record implementation
- Effective utilization of emerging technologies
- Pandemic (COVID-19) response

4.2 Geographic Service Area

BRS is a national program with BRCs providing regional inpatient services and outpatient programs (VISORS, ALVCs, and ILVCs) providing services at the VISN level. There are 13 BRCs located in 10 VISNs throughout the country. Regions are not formally defined, though most BRC services at each location are provided to Veterans within the VISN or adjacent VISNs (Appendix D2). Regional definitions and standardized referral patterns are addressed in the planning guidelines.

The BRS network was intended to provide a CoC in each VISN having either a BRC or a VISOR program to serve higher acuity needs. Additionally, each VISN with a BRC was intended to have either an ALVC or ILVC while each VISN with a VISOR was intended to have both an ALVC and ILVC to serve lower and moderate acuity needs.²¹ However, shifting VISN boundaries, Veteran migration, funding, and other factors have led to uneven program distribution across regions and VISNs as well as relative to existing and expected future Veteran population centers.

4.3 Planning Guidelines

Planning guidelines and thresholds seek to inform the market assessment process. The rationale for establishing VA planning guidelines and thresholds is rooted in the belief that where a VA service falls below the identified measure, quality, patient safety, or operational efficiency may be compromised. Therefore, a service must be carefully examined to ensure that Veteran needs are appropriately met. Planning guidelines and thresholds focus on a broad range of access, demand, staffing, quality, and facilities/ environment of care considerations and are meant to help identify areas where the teams should consider more carefully. The guidelines and thresholds developed are not meant to be used to make any specific recommendations without consideration of additional factors.

When conducting the market assessments, opportunities developed were standardized across a range of move (or strategic task) types. Those developed included major moves as well as opportunities to be addressed during the ordinary course of business. Ultimately, major moves represent the platform which will be vetted with senior VA leadership, with the VHA Executive in Charge (EIC), the Secretary of VA, the Asset and Infrastructure Review (AIR) Commission, and ultimately with Congress.



Planning guidelines derived from these efforts have been designed to assist in the standardization of major market moves and include the following:.^{**}

- **Open** Establish a new site or program in an area with no current Blind Rehabilitation Services
- Maintain:
 - Maintain no major move is recommended
 - Resize maintain services at the current site and size appropriately to accommodate projected demand
 - Relocate Program maintain services within the same geographic service area but relocate to another VA site
 - Relocate Facility
 – maintain services and relocate the site within the same county to better place services closer to where Veterans live or to a site that can better fit services
 - **Reclassify –** transition to an ILVC to an ALVC, or an ALVC to an ILVC
 - **Modernize Facility** update environment of care by improving or adding new building systems without changing the function of the existing space
 - Replace Facility applicable for standalone programs maintain services within the same area in a new facility due to the current facility's inability to modernize efficiently
- **Partner** Creating a partnership where VA providers deliver care in coordination with a partner or where VA transitions care to a partner
 - Partner (VA Delivered) a partnership in which VA providers deliver care to Veterans in coordination with a partner, such as through a VA hospital within a hospital (HwH) on a partner hospital campus, credentialing VA providers within a partner facility, or establishing a VA point of care within a partner space
 - Partner (CCN/AA/Federal) transition care from a VA site and from VA providers to the Community Care Network, an Academic Affiliate, or to Federal providers and facilities. VA provides care coordination but does not deliver clinical care

^{**}All National Planning Strategy service planning guidelines may not include all major market move types



Blind Rehabilitation Referral Pathway Catchment Areas

Based on guidance from BRS leadership and the cross-VISN services provided by BRCs, the BRS program should develop referral pathway catchment areas based on VISN boundaries. The proposed structure divides the country into five referral pathway catchment areas based on an analysis of geographical size, projected regional enrollee population, and projected regional population of Veterans with visual impairment. The proposed referral pathway catchment areas are as follows:

- 1. Northeast: VISN 1, VISN 2, VISN 4, VISN 5, VISN 10
- 2. Southeast: VISN 6, VISN 7, VISN 8, VISN 9
- 3. Central: VISN 12, VISN 15, VISN 23
- 4. Southwest: VISN 16, VISN 17, VISN 22
- 5. Northwest: VISN 19, VISN 20, VISN 21

Planning Guidelines Table

MAHSO Planning Guidelines and Thresholds							
Service	Blind Rehabilitation Center (BRC)						
Geography	Regional Service Area. Minimum of 1 BRC per referral pathway catchment area. Additional BRCs may be added based on Demand and Supply criteria listed below.						
Prerequisites	All BRCs are required to be accredited under TJC Standards Manual and attain and maintain accreditation under CARF Vision Rehabilitation Services Standards Manual – Treatment standards. All new programs are required to attain accreditation within 18 months of opening. All BRCs will maintain staffing levels as outlined in VHA Directives. ¹						

Open BRC									
Planning Domain	Planning Guideline	Rationale							
Demand	 <15 bed tier: Target 8.8-9.4 minimum ADC 15-25 bed tier: Target 15.4-16.3 minimum ADC 26+ bed tier: Target 24.5-26.1 minimum ADC 	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Supply	 Bed Program Tiers: <15 existing beds 15-25 existing beds 26+ existing beds 80.0-85.0% target occupancy rate 	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Access	 Located on a VAMC campus in a major metropolitan area Co-located with specialty care to assist with co-morbidities that accompany blindness 	 Analysis of VA Market populations Interviews with and directive from the BRS Program Office 							
Quality	Quality metrics are not used to determine the o	pening of a new site							



Open BRC										
Planning Domain	Planning Guideline	Rationale								
Other	 Hoptel or temporary lodging available Co-locate in VAMCs that are not space constrained 	 Hoptel or temporary lodging needed to accommodate families for BRS Family Training program Interviews with and directive from the BRS Program Office 								

	Maintain BRC No Change, Resize, Relocate, Modernize, or Replace								
Planning Domain	Planning Guideline	Rationale							
Demand	 <15 bed tier: Target 8.8-9.4 minimum ADC 15-25 bed tier: Target 15.4-16.3 minimum ADC 26+ bed tier: Target 24.5-26.1 minimum ADC 	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Supply	 Bed Program Tiers <15 existing beds 15-25 existing beds 26+ existing beds 80.0-85.0% target occupancy rate 	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Access	 Located on a VAMC campus in a major metropolitan area Co-located with specialty care to assist with co-morbidities that accompany blindness 	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Quality	• N/A	 Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 							
Other	 Maintain Projected ADC is similar to the current ADC and the service is appropriately sized Planning guidelines are met or exceeded 	 Maintain Current resources can meet projected demand There is projected future, sustainable demand 							
	Resize (increase capacity) Demand exceeds capacity 	 Resize (increase capacity) Matching supply to demand will optimize access and resource utilization 							



	Maintain BRC No Change, Resize, Relocate, Modernize, or Replace									
Planning Domain	Planning Guideline	Rationale								
	Resize (decease capacity)Demand is below capacity	 Resize (decrease capacity) Matching supply to demand will optimize access and resource utilization 								
	Relocate • N/A	 Relocate (program move) Interviews with and directive from the BRS Program Office Ties to existing program locations and bed complements 								
	 Modernize or Replace Facilities Condition Assessment (FCA) indicates the cost to replace facilities housing BRC services is less than the cost to repair or maintain BRC services Facility design accommodates women Veterans with private rooms and private bathrooms. 	 Modernize/Replace The infrastructure does not adhere to current VA design standards 								

	Partner VA BRC Partner AA / Federal / CCN (Buy) BRC
Partner-VA	There are no current examples of VA delivered care with community partners and no viable community partners were identified that offer comparable residential services.
Partner – AA / Federal / CCN (Buy)	No external partnerships are applicable for BRCs

Additional Planning Guidelines

In addition to referral pathway catchment areas established and the planning guidelines developed by move type, there are two more planning guideline considerations. These planning guidelines address high-level staffing minimums and how the program may be influenced by increased telehealth utilization. ³¹

Telehealth Utilization

Telehealth utilization should continue to increase across the BRS CoC. The BRS Program Office has identified three key aspects of telehealth usage to improve: total capability, encounter utilization, and unique utilization. The following are the BRS key performance indicators identified for FY 2020: ⁶



- Capability: BRS CoC will increase telehealth provider capability by 20% for VIST Coordinators and BROS from the previous year.
- Encounters: BRS CoC will increase total telehealth encounters by 20% from the previous year.
- Uniques: BRS will increase the total number of unique Veterans receiving VVC to home by 5% from the previous year.

Detailed Threshold Rationale

The BRS planning guidelines were driven by exploration of current VHA Guidelines and Directives, Analysis of Market, VISN, Regional, and National level data including the EHCPM projections and Blind Rehabilitation Prevalence model, and interviews and working sessions with the Blind Rehabilitation Program Office. Ultimately, planning guidelines established were based on the following:

- Geographic distribution criteria (referral pathway catchment areas) and bed tiers developed were based on input and guidance from the BRS Program Office. The resulting ADC criteria were developed to ensure sustainable, operationally efficient programs.
- Occupancy rate targets were established in conjunction with the BRS Program Office as well.



5. Future Program Planning

5.1 Applying the Blind Rehabilitation National Planning Strategy to VA Market Assessments

The VA MAHSO effort completed an initial assessment of VA markets, facilities, and service lines to produce recommendations for the design of high-performing integrated delivery networks. VA Leadership identified select service lines, studied during the market assessments, for development of a standard national strategy and approach to planning and maintaining programs. Blind Rehabilitation was identified as a service line requiring a set of national planning guidelines and thresholds that would be applicable for use in current (MAHSO) and future planning efforts.

This document, the Blind Rehabilitation National Planning Strategy, establishes the definitive, consistent planning guidelines to be used for all VA Blind Rehabilitation planning efforts moving forward.

The national planning guidelines will be used to ensure the final market assessments apply standard programmatic criteria across the nation, but with full consideration of the range of care archetypes that exist within VA. The guidelines will be useful to VA planners to inform future quadrennial market assessments and other planning exercises.

How will MAHSO apply the Blind Rehabilitation National Planning Strategy?

The four-step process for revisiting MAHSO draft opportunities describes how Blind Rehabilitation specific opportunities will be reviewed and updated, if necessary.

1. Review Phase 1-3 Market Assessment Data and Blind Rehabilitation Opportunities

The scope of review will include revisiting Phase 1-3 markets, re-assessing all market opportunities using new thresholds and data (as applicable), and potentially developing new opportunities.

2. Apply Blind Rehabilitation Planning Guidelines

For each market and applicable draft Blind Rehabilitation opportunity, the planner will review market assessment data and apply Blind Rehabilitation planning guidelines. The reassessment will include any new data sources in the updated methods described previously. Next, planning guidelines developed here (demand, supply, access, quality, and mission, and other areas) will be applied to existing opportunities.



3. Update/Create Blind Rehabilitation Opportunities

As needed, existing market optimization or capital opportunities will be revised. In addition, after application of the planning guidelines and thresholds, new Blind Rehabilitation opportunities may also be created.

4. Review and Finalize with VA Leadership

Once draft opportunities are revised or developed and are ready for VA Leadership approval, a review with the Chief Strategy Office (CSO), VHA Leadership and VISN Directors will move the opportunities towards finalization.

Conclusion

The Blind Rehabilitation National Planning Strategy is a framework for designing consistent service delivery planning for Blind Rehabilitation services. Based on Blind Rehabilitation Service National Program Office program priorities, the Blind Rehabilitation National Planning Strategy provides guidance on how Blind Rehabilitation programs can respond to varied market demands and trends while optimizing VA resources in a Veteran-centric framework. These guidelines and thresholds will be used to ensure that capital planning is matched to Veteran demand and a consistent set of recommendations is established to inform and support the development of the National Realignment Strategy.



Appendix A: References

- 1. "Pre-Decisional Deliberative Document" Veterans Health Administration. VHA Directive 1174: Blind and Visual Impairment Continuum of Care. Washington DC 2020.
- 2. Veterans Health Administration. VHA Handbook 1174.05: Outpatient Blind and Vision Rehabilitation Clinic Procedures: Veterans Health Administration, Department of Veterans Affairs; 2011.
- 3. Department of Veterans Affairs. FY 2019 VSSC Beds Using PTF Cube 2019.
- 4. Department of Veterans Affairs. Blind Rehabilitation Services. *Rehabilitation and Prosthetic Services*. February 6, 2017. Available at: https://www.prosthetics.va.gov/PROSTHETICS/blindrehab/index.asp.
- 5. Legal Information Institute. 38 U.S. Code § 1706 Management of health care: other requirements. *Cornell Law School*. Available at: <u>https://www.law.cornell.edu/uscode/text/38/1706</u>. Accessed March 2021.
- 6. Blind Rehabilitation Service National Program Office. *Resource Materials for Market Analysis*. Washington DC: Veterans Health Administration; February 22, 2021.
- 7. Veterans Health Administration. VHA Handbook 1174.04: Blind Rehabilitation Center Program Procedures: Veterans Health Administration, Department of Veterans Affairs; 2009.
- 8. American Optometric Association. Low Vision and Vision Rehabilitation. Available at: <u>https://www.aoa.org/healthy-eyes/caring-for-your-eyes/low-vision-and-vision-rehab?sso=y</u>.
- 9. Department of Veterans Affairs. BY2017 EHCPM, Projected Enrollment and Vet Pop Cube 2018.
- 10. Centers for Disease Control and Prevention. Vision Loss: A Public Health Problem. Vision Health Initiative. June 12, 2020. Available at: <u>https://www.cdc.gov/visionhealth/basic_information/vision_loss.htm</u>.
- 11. Saaddine JB, Venkat Narayan KM, Vinicor F. Vision Loss: A Public Health Problem. *Centers for Disease Control and Prevention*. June 12, 2003. Available at: <u>https://www.cdc.gov/visionhealth/basic_information/vision_loss.htm</u>.
- Vision Health Initiative (VHI). Common Eye Disorders and Diseases. Centers for Disease Control and Prevention. June 3, 2020. Available at: <u>https://www.cdc.gov/visionhealth/basics/ced/index.html#:~:text=The%20leading%2</u> <u>Ocauses%20of%20blindness,disorders%20include%20amblyopia%20and%20strab</u> <u>ismus</u>.
- 13. American Macular Degeneration Foundation. What is Macular Degeneration? *American Macular Degeneration Foundation*. December 20, 2017. Available at: <u>https://www.macular.org/what-macular-degeneration</u>.
- 14. National Eye Institute. Age-Related Macular Degeneration. *National Eye Institute, National Institutes of Health*. Available at: <u>https://www.nei.nih.gov/learn-about-eye-</u>



health/eye-conditions-and-diseases/age-related-macular-degeneration. Accessed August 17, 2020.

- 15. National Eye Institute. Age-Related Macular Degeneration (AMD) Data and Statistics. *National Eye Institute, National Institutes of Health.* July 17, 2019. Available at: <u>https://www.nei.nih.gov/learn-about-eye-health/resources-for-healtheducators/eye-health-data-and-statistics/age-related-macular-degeneration-amddata-and-statistics.</u>
- 16. National Eye Institute. Cataracts. *National Eye Institute, National Institutes of Health*. August 3, 2019. Available at: <u>https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/cataracts</u>.
- 17. National Eye Institute. Cataract Data and Statistics. *National Eye Institute, National Institutes of Health*. July 17, 2019. Available at: https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics.
- 18. National Eye Institute. Diabetic Retinopathy Data and Statistics. *National Eye Institute, National Institutes of Health.* November 19, 2020. Available at: http://nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/diabetic-retinopathy-data-and-statistics.
- 19. National Eye Institute. Glaucoma Data and Statistics. *National Eye Institute, National Institutes of Health.* July 17, 2019. Available at: <u>https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/glaucoma-data-and-statistics</u>.
- 20. Blind Rehabilitation Service National Program Office. VI LB Projections: Department of Veterans Affairs; 2020.
- 21. Blind Rehabilitation Service National Program Office. *National Planning Strategy Meeting Notes* September 2020-March 2021.
- 22. Frayne S, Phibbs C, Saechao F, et al. Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4:Longitudinal Trends in Sociodemographics, Utilization, Health Profile, and Geographic Distribution. Washington DC: Department of Veterans Affairs; 2018.
- 23. Department of Veterans Affairs. VA Priority Groups. June 13, 2020. Available at: <u>https://www.va.gov/health-care/eligibility/priority-groups/</u>.
- 24. uSPEQ. uSPEQ: Giving Quality a Voice. Available at: https://www.uspeq.org/home.html.
- 25. Fontenot JL, Bona MD, Kaleem MA, Shepherd JD. Vision Rehabilitation Preferred Practice Pattern. *American Academy of Ophthalmology*. 2017;125(1):228-278.
- 26. World Health Organization. International Standards for Vision Rehabilitation: Report of the International Consensus Conference. Paper presented at: WHO International Consensus Conference on Vision Rehabilitation Standards , 2015; Rome.



- 27. Vision Aware. About the APH Directory of Services. *Vision Aware*. Available at: <u>https://visionaware.org/directory/about-the-aph-directory-of-services/</u>. Accessed August 13, 2020.
- 28. Shah P, Schwartz SG, Gartner S, Scott IU, Flynn HW,J. Low Vision Services: A Practical Guide for the Clinician. *Therapeutic Advances in Ophthalmology*. June 2018;10.
- 29. Virginia Rehabilitation Center for the Blind and Vision Impaired. Learn More About VRCBVI. *Virginia Rehabilitation Center for the Blind and Vision Impaired*. Available at: <u>https://www.vrcbvi.org/about.htm</u>. Accessed August 13, 2020.
- 30. Binns AM, Bunce C, Dickinson C, Harper R, Tudor-Edwards R, Woodhouse M. How Effective is Low Vision Service Provision? A Systematic Review. *Survey of Opthalmalogy International Review Journal*. January 2012;57(1):34-65.
- 31. Johns Hopkins Medicine Wilmer Eye Institute. Wilmer Eye Institute Vision Rehabilitation. *Johns Hopkins Medicine Wilmer Eye Institute*. Available at: <u>https://www.hopkinsmedicine.org/wilmer/services/low_vision/</u>. Accessed August 13, 2020.
- 32. Lions Vision Research Foundation I. Lions Low Vision Center. *Lions Vision Research Foundation, Inc.* Available at: <u>http://www.lionsvision.org/Lions-Low-Vision-Center/</u>. Accessed August 1, 2020.
- 33. Berkeley School of Optometry. Lighthouse for the Blind and Visually Impaired. Berkeley School of Optometry. Available at: <u>https://optometry.berkeley.edu/clinicmanual/clinical-services/lighthouse-for-the-blind-and-visually-impaired/</u>. Accessed August 13, 2020.
- 34. Lighthouse Guild. Lighthouse Guild. Available at: https://www.lighthouseguild.org/.
- 35. The Chicago Lighthouse. The Chicago Lighthouse. Available at: <u>https://chicagolighthouse.org/</u>.
- 36. Miami Lighthouse for the Blind and Visually Impaired. Available at: <u>https://www.miamilighthouse.org/</u>.
- 37. Lighthouse for the Blind and Visually Impaired. Blind & Low Vision Skills Training. *Lighthouse for the Blind and Visually Impaired*. Available at: <u>https://lighthouse-sf.org/programs/skills/</u>. Accessed August 13, 2020.
- 38. Henry Ford Health System. Henry Ford Center for Vision Rehabilitation and Research. Available at: <u>https://www.henryford.com/services/eye/center-for-vision-rehabilitation-and-research#:~:text=The%20Henry%20Ford%20Center%20for,of%20life%20and%20well%2Dbeing.</u>
- 39. Wills Eye Hospital. Low Vision. Available at: <u>https://www.willseye.org/medical-</u> services/low-vision/.
- 40. Academy for Certification of Vision Rehabilitation & Educational Professionals (ACVREP). Academy for Certification of Vision Rehabilitation & Educational Professionals (ACVREP). Available at: <u>https://www.acvrep.org/</u>.



- 41. Association of Schools and Colleges of Optometry. Low Vision Rehabilitation Basic Information. n.d.. Available at: https://myasco.opted.org/residency/view/102/program.
- 42. Johns Hopkins Medicine WIImer Eye Institute. Wilmer Eye Institute Current Research in Vision Rehabilitation. *Johns Hopkins Medicine Wilmer Eye Institute*. Available at: <u>https://www.hopkinsmedicine.org/wilmer/services/low_vision/research.html</u>. Accessed November 24, 2020.
- 43. CARF International. Vision Rehabilitation Services. *CARF International*. Available at: <u>http://carf.org/Vision-Rehabilitation-Services/</u>.
- 44. Stelmack JA, Tang CX, Wei Y. Outcomes of the Veterans Affair Low Vision Intervention Trial II (LOVIT II): A Randomized Clinical Trial. *JAMA Ophthalmology*. 2017;135(2):96-104.
- 45. Zimbalist R, Scharnweber A. Teleretinal Imaging for Diabetic Retinopathy. *Review of Optometry*. December 2016.
- 46. Chasan JE, Delaune B, Maa AY, Lynch MG. Effect of a teleretinal screening program on eye care use and resources. *JAMA Ophthalmology*. 2014;132(9):1045-1051.



Appendix B: Interviews

Office	Date
VA Blind Rehabilitation Service, National Program Office	September 28, 2020
VA Blind Rehabilitation Service, National Program Office	October 5, 2020
VA Blind Rehabilitation Service, National Program Office	November 2, 2020
VA Blind Rehabilitation Service, National Program Office	November 16, 2020
VA Blind Rehabilitation Service, National Program Office	December 10, 2020
VA Blind Rehabilitation Service, National Program Office	January 11, 2021
VA Blind Rehabilitation Service, National Program Office	March 2, 2021
VA Blind Rehabilitation Service, National Program Office	March 10, 2021
VA Blind Rehabilitation Service, National Program Office	March 16, 2021
VA Blind Rehabilitation Service, National Program Office	April 1, 2021
VA Blind Rehabilitation Service, National Program Office	April 15, 2021
VA Blind Rehabilitation Service, National Program Office	April 20, 2021
VA Blind Rehabilitation Service, National Program Office	April 23, 2021
VA Blind Rehabilitation Service, National Program Office	April 27, 2021
VA Blind Rehabilitation Service, National Program Office	April 30, 2021





Appendix C: Acronyms

Acronym	Description
AA	Academic Affiliate
AAO	Academy of Ophthalmology
ACVREP	Academy for Certification of Vision Rehabilitation and Education Professionals
ADC	Average Daily Census
ADL	Activities of Daily Living
AIR	Asset and Infrastructure Commission
ALVC	Advanced Low Vision Clinic
AMD	Age-Related Macular Degeneration
AMC	Academic Medical Centers
BDOC	Bed Days of Care
BRC	Blind Rehabilitation Center
BROS/BRS	Blind Rehabilitation Outpatient Specialist/ Blind Rehabilitation Specialist
BRS	Blind Rehabilitation Service
BRS PO	Blind Rehabilitation Service Program Office
BY	Base Year
CARF	Commission on Accreditation of Rehabilitation Facilities
CAT	Computer Access Training
CBOC	Community Based Outpatient Clinic
CCN	Community Care Network
CDC	Centers for Disease Control
CMS	Centers for Medicare and Medicaid Services
CoC	Continuum of Care
COVID-19	Coronavirus Disease 2019
CSO	Chief Strategy Office
DR	Diabetic Retinopathy
EHCPM	Enrollee Health Care Projection Model
EHRM	Electronic Health Record Modernization
FDA	Food and Drug Administration
FTE	Full-Time Equivalent
FY	Fiscal Year
HCC	Health Care Center
HHS	Health and Human Services
HRR	Hospital Referral Region
IADL	Instrumental Activities of Daily Living
ILVC	Intermediate Low Vision Clinic



Acronym	Description
IP	Inpatient
LOS	Length of Stay
MAHSO	Market Area Health Systems Optimization
MISSION	Maintaining Systems and Strengthening Integrated Outside Networks
NP	Nurse Practitioner
NPS	National Planning Strategy
OP	Outpatient
O&M	Orientation and Movement
RCT	Randomly Controlled Trails
TJC	The Joint Commission
TRI	Teleretinal Imaging
uSPEQ	Universal Stakeholder Participation Questionnaire
VA	Veterans Affairs
VACO	Department of Veterans Affairs Central Office
VAMC	VA Medical Center
VHA	Veterans Health Administration
VICTORS	Visual Impairment Center to Optimize Remaining Sight
VISN	Veterans Integrated Service Network
VISOR	Visual Impairment Services Outpatient Rehabilitation
VIST	Visual Impairment Services Team
VVC	VA Video Connect
WHO	World Health Organization



Appendix D: Data

Data Appendix 1: FY 2019 Count of Blind Rehabilitation Services by VISN¹

VISN Inpatient BRC Centers		VICTORS (not part of BRS)	VISOR	Advanced Low Vision Clinics	Intermediate Low Vision Clinics	VISN Total
1	1	0	0	1	1	3
2	0	1	2	2	2	7
4	0	0	1	1	1	3
5	0	0	1	1	1	3
6	0	0	1	1	1	3
7	2	0	0	1	1	4
8	2	1	0	1	1	5
9	0	0	0	1	1	2
10	1	0	1	2	1	5
12	1	1	0	1	1	4
15	0	0	0	1	2	3
16	1	0	1	1	0	3
17	1	0	0	1	1	3
19	0	0	1	1	1	3
20	1	0	0	1	0	2
21	1	0	0	1	1	3
22	2	0	0	3	2	7
23	0	0	1	1	1	3
Program Total	13	3	9	22	19*	66

*Note: ILVC 21 (2 clinics need to submit a deviation memo; 52 outpatient clinics)



Data Appendix 2: FY 2019 Bed Days of Care by Patient VISN and BRC Center

	Bed Days of Care by Patient VISN and BRC Center													
Patient VISN	America n Lake, WA (VISN 20)	Augusta Uptown, GA (VISN 7)	Biloxi, MS (VISN 16)	Birming ham, AL (VISN 7)	Clevela nd, OH (VISN 10)	Hines, IL (VISN 12)	Long Beach, CA (VISN 22)	Menlo Park, CA (VISN 21)	San Juan, PR (VISN 8)	Tucson, AZ (VISN 22)	Waco, TX (VISN 17)	West Haven, CT (VISN 1)	West Palm Beach, FL (VISN 8)	Grand Total
1		86			135	63	53	40		244		980	66	1,667
2					575				15			408		998
4		37			741			74			18	1,053		1,923
5		116			359	57				61		401		994
6	16	1,073	148	145	45	44	14			530		85	32	2,132
7		1,504	152	2,792	31	16		59		160	21	104	173	5,012
8	11	333	119	354		192			1,974	81			2,930	5,994
9		73	149	1,228		645		105		15				2,215
10		34		39	2,322	1,849		56		22			18	4,340
12						2,735		38						2,773
15			23		77	1,764	39	32		72	298			2,305
16			5,002	224		174				252	59		80	5,791
17			557	92		52		52	14	295	2,024			3,086
19	221		144			170		90		1,489	36			2,150
20	1,277						80			129				1,486
21				11	24		376	3,514						3,925
22			52				3,508	200		3,682	20			7,462
23			88			1,746		163		54				2,051
Grand Total	1,525	3,256	6,434	4,885	4,309	9,507	4,070	4,423	2,003	7,086	2,476	3,031	3,299	56,304

Source: Department of Veterans Affairs, VISN Support Services Center Encounters Cube



Data Appendix 3: FY 2019 Projection Model for Veterans with Visual Impairment (20/70 up to and including NLP) ⁶

VISN	2015	2020	2025	2030	2035	FY 2035 % of Total Visually Impaired Vets
VISN 1	50,547	44,763	39,712	35,620	29,213	3.0%
VISN 2	64,373	54,769	46,575	39,974	30,489	3.0%
VISN 4	64,412	58,721	53,457	49,168	42,024	5.0%
VISN 5	37,095	35,853	34,833	34,342	32,825	4.0%
VISN 6	55,605	58,656	61,580	65,311	70,130	8.0%
VISN 7	63,025	66,733	69,673	72,901	75,849	9.0%
VISN 8	83,512	82,133	80,921	80,523	77,071	9.0%
VISN 9	42,936	44,255	44,903	45,560	45,093	5.0%
VISN 10	92,396	88,069	82,817	77,667	67,535	8.0%
VISN 12	51,703	47,089	42,996	39,482	33,459	4.0%
VISN 15	41,360	39,955	38,483	37,456	35,038	4.0%
VISN 16	45,675	45,929	45,978	46,474	46,275	5.0%
VISN 17	67,587	68,091	69,094	70,944	72,682	8.0%
VISN 19	45,987	45,544	45,296	45,473	44,727	5.0%
VISN 20	48,434	48,650	48,680	48,711	47,198	5.0%
VISN 21	55,601	51,427	48,137	45,624	41,046	5.0%
VISN 22	74,620	65,872	60,829	57,245	51,581	6.0%
VISN 23	47,182	45,077	42,925	41,173	37,532	4.0%
Grand Total	1,032,050	991,585	956,888	933,647	879,767	100.0%



Data Appendix 4: FY 2019 Blind Rehabilitation Service Continuum of Care Regional Distribution ⁶

СоС Туре	VA Medical Facility Name and Location	District / VISN	VA medical Facility STA_NO
ILVC	White River Junction VA Medical Center	1V01	405
ILVC	Albany Stratton VA Medical Center	1V02	528A8
ILVC	VA Hudson Valley Health Care System	1V02	620
ILVC	VA Pittsburgh Health Care System	1V04	646
ILVC	Martinsburg VA Medical Center	1V05	613
ILVC	Hampton VA Medical Center	1V06	590
ILVC	Columbia VA Health Care System	2V07	544
ILVC	North Florida/South Georgia Veterans Health System	2V08	573DG
ILVC	Memphis VA Medical Center	2V09	614
ILVC	John D. Dingell VA Medical Center	3V10	553
ILVC	William S. Middleton Memorial Veteran Hospital	3V12	607
ILVC	VA St. Louis Health Care System	3V15	657
ILVC	Kansas City VA Medical Center	3V15	589
ILVC	Central Texas Veterans Health Care System	4V17	674
ILVC	Oklahoma City VA Health Care System	4V19	635
ILVC	VA Southern Nevada Health Care System	5V21	593
ILVC	New Mexico VA Health Care System	5V22	501
ILVC	VA Loma Linda Health Care System	5V22	605
ILVC	Sioux Falls VA Health Care System	3V23	438
ALVC	VA Boston Health Care System	1V01	523
ALVC	Syracuse VA Medical Center	1V02	528A7



СоС Туре	VA Medical Facility Name and Location	District / VISN	VA medical Facility STA_NO
ALVC	VA NY Harbor Health Care System	1V03	630
ALVC	Corporal Michael J. Crescenz VA Medical Center	1V04	642
ALVC	VA Maryland Health Care System	1V05	512
ALVC	W.G. (Bill) Hefner VA Medical Center	1V06	659
ALVC	Atlanta VA Health Care System	2V07	508
ALVC	James A. Haley Veterans Hospital	2V08	673
ALVC	Tennessee Valley Health Care System	2V09	626
ALVC	Dayton VA Medical Center	3V10	552
ALVC	Aleda E. Lutz VA Medical Center	3V10	655
ALVC	Clement J. Zablocki VA Medical Center	3V12	695
ALVC	Robert J. Dole VA Medical Center	3V15	589A7
ALVC	VA Central Iowa Health Care System	3V23	636A6
ALVC	Central Arkansas Veterans Health Care System	4V16	598
ALVC	VA North Texas Health Care System	4V17	549
ALVC	George E. Wahlen VA Medical Center	4V19	660
ALVC	VA Portland Health Care System	5V20	648
ALVC	VA Northern California Health Care System	5V21	612A4
ALVC	Phoenix VA Health Care System	5V22	644
ALVC	VA Greater Los Angeles Health Care System	5V22	691
ALVC	VA San Diego Health Care System	5V22	664
VISOR	VA Western New York Health Care System	1V02	528
VISOR	VA New Jersey Health Care System	1V02	561
VISOR	Lebanon VA Medical Center	1V04	595



СоС Туре	VA Medical Facility Name and Location	District / VISN	VA medical Facility STA_NO
VISOR	Washington D.C. VA Medical Center	1V05	688
VISOR	Hunter Holmes McGuire VA Medical Center Richmond, VA	1V06	652
VISOR	Battle Creek VA Medical Center	3V10	515
VISOR	Michael E. Debakey VA Medical Center	4V17	580
VISOR	VA Eastern Colorado Health Care System	4V19	554
VISOR	Minneapolis VA Health Care System	3V23	618
BRC	VA Connecticut Health Care System	1V01	689
BRC	Charlie Norwood VA Medical Center	2V07	509
BRC	Birmingham VA Medical Center	2V07	521
BRC	VA Caribbean Health Care System	2V08	672
BRC	West Palm Beach VA Medical Center	2V08	548
BRC	Louis Stokes Cleveland VA Medical Center	3V10	541
BRC	Edward Hines, Jr. VA Hospital	3V12	578
BRC	Gulf Coast Veterans Health Care System	4V16	520
BRC	Central Texas Veterans Health Care System	4V17	674A4
BRC	VA Puget Sound Health Care System	5V20	663
BRC	VA Palo Alto Health Care System	5V21	640
BRC	VA Long Beach Health Care System	5V22	600
BRC	Southern Arizona VA Health Care System	5V22	678



Appendix E: Definitions

Statutory Blindness. VHA defines statutory blindness according to criteria used by the Social Security Administration (SSA). Statutory blindness is evaluated by the following methodology. Most test charts that use Snellen methodology do not have lines that measure visual acuity between 20/100 and 20/200. Newer test charts, such as the Bailey-Lovie or the Early Treatment Diabetic Retinopathy Study (ETDRS), do have lines that measure visual acuity between 20/100 and 20/200. If a patient's visual acuity is measured with one of these newer charts and they cannot read any of the letters on the 20/100 line, it will be determined that they have statutory blindness based on a visual acuity of 20/200 or less. For example, if a patient's best-corrected visual acuity for distance in the better eye was determined to be 20/160 using an ETDRS chart, it will be determined that the patient has statutory blindness. Regardless of the type of test chart used, a patient does not have statutory blindness if they can read at least one letter on the 20/100 line. For example, if a patient's best corrected visual acuity for distance in the better eye was determined to be 20/125+1 using an ETDRS chart, it will be determined that the patient does not have statutory blindness as the patient is able to read one letter on the 20/100 line.¹

Visual Impairment. Visual impairment is a functional limitation of the eye(s) or visual system and can manifest as reduced visual acuity or contrast sensitivity, visual field loss, photophobia, diplopia, visual distortion, visual perceptual difficulties or any combination of the above. A visual impairment can cause disability(ies) by significantly interfering with one's ability to function independently, such as performing ADL/IADL, travelling safely and self-care management. Specific problems include, but are not limited to, loss of the ability to read standard-sized print, inability or limitation with respect to driving, difficulty performing work-related tasks, leisure activities and inability to recognize faces. ¹

Legal blindness. VHA defines legal blindness using the definition found in 42 U.S.C. § 416(i)(1)(B). Legal blindness is central visual acuity of 20/200 or less in the better eye with the use of a correcting lens. An eye which is accompanied by a limitation in the fields of vision such that the widest diameter of the visual field subtends an angle no greater than 20 degrees shall be considered for purposes of this paragraph as having a central visual acuity of 20/200 or less. ¹

Low Vision. For the purpose of this directive, low vision is defined as a condition in which there is significant loss of vision uncorrectable by conventional means (eyeglasses, contact lenses, medicines or surgery) that negatively affects patient safety or impairs or restricts one or more activities of daily living (ADLs and/or Instrumental ADLs). Low vision can encompass loss of visual acuity or visual field loss or a combination of loss of visual acuity, visual field loss, contrast sensitivity loss, loss of stereopsis or eye motility impairment. ¹



Appendix F: VIST Coordinator Staffing Guidelines

Each Department of Veterans Affairs (VA) medical facility supports the Visual Impairment Services Team (VIST) program by ensuring sufficient staffing to meet caseload demand. Local VIST roster staffing guidelines are as follows: ¹

- Rosters of 150 Veterans or Less. Establish a part-time VIST Coordinator for facilities with less than 150 Veterans on the VIST roster. A minimum of half time is required for VIST duties. Part-time VIST Coordinators must devote 50% time to a VIST caseload and responsibilities to fully perform all duties required for care coordination for a Veteran with visual impairment caseload.
- **Rosters of 150-500 Veterans.** Establish a full-time VIST Coordinator in a Hybrid Title 38 (HT 38) 0601 series position in facilities with greater than 150 Veterans on the national and VA medical facility VIST roster. This ensures dedicated time to serve Veterans with visual impairment.
- Rosters Greater than 500 Veterans. Assess whether one full-time VIST Coordinator can adequately provide the services described in this directive in facilities with VIST rosters greater than 500 Veterans. This is a local staffing decision that requires input from the BRS national office and may consider: shared resources as an interim measure, projected vs. actual workloads, and adequacy of care.



Appendix G: Blind Rehabilitation Services Levels of Care Coordination

The Blind Rehabilitation Service (BRS) Continuum of Care (CoC) offers cascading levels of care coordination to all Veterans with visual impairment enrolled in the BRS CoC. BRS Care Coordination provides structured systems support to complement the blind and visual impairment rehabilitation care offered in BRS. Before, during and after the episode(s) of care to the eligible Veteran or Servicemember, the Visual Impairment Services Team (VIST) Coordinator is responsible for determining and implementing one of four levels of BRS Care Coordination – Complex, Moderate, Basic or Lifetime. Each model requires varying degrees of intervention based on the clinical and psychosocial needs of each Veteran and is not based solely on visual acuity. ¹

Complex Level of Care Coordination: It is suggested for Complex Level of Care Coordination management to occur at a minimum of a monthly basis. Veterans with visual impairment are often referred to VIST Coordinators because they experience a problem that impedes their ability to manage and accomplish functional tasks and because they are facing a daunting adjustment to living with visual impairment. VIST Coordinators provide a thorough assessment to plan the intervention and rehabilitation goals with Veteran and family. Education and support for the Veteran's family and significant others is critical during this phase.

Moderate Level of Care Coordination: It is suggested for Moderate Level of Care Coordination to occur on a quarterly basis. This level of care is implemented when a Veteran with visual impairment no longer requires Complex Level of Care Coordination and transition is to a quarterly follow-up, at a minimum. Education and support for the Veteran's family and significant others remains essential during this phase.

Basic Level of Care Coordination: Basic Level of Care Coordination should occur on a semi-annual basis. This level of care is implemented at the point the individual no longer requires Moderate Level of Care Coordination. This phase may consist of an inperson or telephone follow-up with Veteran and family.

Lifetime Care Coordination: Lifetime Care Coordination should occur on annual basis, at a minimum. This level of care provides ongoing follow-up and review that may be completed annually or bi-annually depending upon the Veteran's goals. This level of care must be implemented at the point that the individual no longer requires Basic Level of Care Coordination and may extend for the remainder of the Veteran's life if the Veteran continues to benefit and is agreeable to receiving VIST services. Care coordination during this phase requires a VIST Review.