

AN EXAMINATION OF INTERSTATE DIFFERENCES IN ELIGIBILITY CRITERIA  
FOR VOCATIONAL REHABILITATION SERVICES FOR INDIVIDUALS WITH  
VISUAL IMPAIRMENTS

by  
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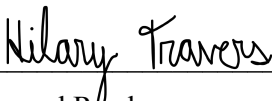
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State VR agencies provide services to individuals with disabilities so that they may prepare for and participate in competitive integrated employment with consideration of their unique strengths and abilities (U.S. DOE, 2020). While general differences between VR agencies have been documented between states (e.g., Cavanaugh, 2010; NTRC, 2022), there has never been an analysis of interstate differences in the interpretation of the outlined eligibility requirements for individuals with visual impairments (VI). In this study, we asked participants to upload their state eligibility document to the survey or email directly to a research team member. To be eligible for the survey, participants had to be current vocational rehabilitation (VR) administrators, directors, or supervisors. Out of the 57 U.S. states and territories contacted, 20 participated in the study, (35%). Eleven states submitted eligibility documentation and completed the survey (19%). Differences in the use of assessment, specifically eye reports and educational records, was found. All survey respondents reported the consideration assessments when determining eligibility for services. However, only eight eligibility criteria documents included the use of assessment. This study is the first of its kind, and more research is needed to understand interstate differences in VR eligibility criteria for individuals with VI.

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## **An Examination of Interstate Differences in Eligibility Criteria for Vocational Rehabilitation Services for Individuals with Visual Impairments**

State Vocational Rehabilitation (VR) Service Programs are sanctioned through the Rehabilitation Act of 1973, amended by Title IV of the Workforce Innovation and Opportunity Act (WIOA) in 2014. State VR agencies provide services to individuals with disabilities so that they may prepare for and participate in competitive integrated employment with consideration of their unique strengths and abilities (U.S. DOE, 2020). Individuals accessing VR services may be adults with newly acquired disabilities or young adults transitioning from school-age to adult disability services. Historically, individuals with visual impairments (VI), including blindness, have higher unemployment rates, lower annual earnings, lower annual household income, and higher poverty rates in comparison to the general U.S. population (Erickson et al., 2018). To reduce disparities in employment and income, many individuals with VI seek employment-related services from state VR agencies.

The Office of Special Education and Rehabilitative Services (OSERS) outlines the provisions states must follow regarding assessment for determining eligibility and priority for VR services (OSERS, 2024). OSERS mandates that state units providing VR services have “clear and convincing evidence” before determining that an individual is incapable of benefiting from services regarding an employment outcome (OSERS, 2024). Examples of assessments VR might use to determine eligibility include situational assessments, supported employment assessments, and functional assessment of skill development activities, with necessary supports (OSERS, 2024). While OSERS requirements are provided for assessment, priority, and the determination of services, states are allowed to develop and enforce their own guidance documents. That is, there is no universal definition nor qualifications for VR services across all states in the United States. While general differences between VR agencies have been documented between states (e.g., Cavanaugh, 2010; NTRC, 2022), there has never

been an analysis of interstate differences in the interpretation of the outlined eligibility requirements for individuals with VI.

### **Who Accesses VR Services?**

There is an estimated 6.3-7.9 million people with visual acuity loss or blindness in the U.S. (Flaxman et al., 2021). Visual acuity loss was defined as an acuity of 20/40 or worse and blindness an acuity of 20/200 or worse in the better eye. Of those with vision loss, it is estimated that 22.9% of persons with visual acuity loss or blindness are under 40 years old (Flaxman et al., 2021). Therefore, the majority of persons with visual acuity loss and blindness in the United States are 40 years or older. Recent studies and program participant information from the United States Department of Education reflect that adults over the age of 40 are accessing VR services (Clapp et al., 2020; U.S. DOE, 2020).

A study by Clapp et al. (2020) examined characteristics of VR agencies and applicants with VI from three states, Maryland, Oklahoma, and Virginia. The mean age of applicants ranged from 39.1 to 47.4 years old across the three states, with a total mean age of 44.2 years old (Clapp et al.). This data supports the notion that adults with VI are applying for VR services to attain successful employment outcomes. Nearly 1,293,000 persons aged 19-60+ participated in VR programming during 2017-2018, compared to 537,674 individuals 18 or younger (U.S., DOE 2022). This information reflects that a wide scope of persons with disabilities are participating in VR services, with a majority being over the age of 19.

### **Current Employment Status Among Individuals with VI**

A recent study by McDonnall et al. (2022) found that people with VI were more likely to work part-time, often involuntarily, compared to those without VI. This was often due to not being able to find full-time employment (McDonnall et al.). Analysis of these findings used data from the American Community Survey (ACS) and Survey of Income Program Participation (SIPP) and did not contain individuals' information about access to VR

services. Further analysis is needed to understand if these individuals with VI have had access to VR services and support in securing employment.

An examination of data from multiple sources found that approximately 44% of the population with a VI is employed, while 10% are unemployed, and 50.9% are not in the labor force (McDonnall & Sui, 2019). More current research examining data from the 2019 ACS found that 46.2% of people with VI were employed compared to 78.6% of non-disabled people (McDonnall et al., 2022). While there was a slight increase in the percentage of people with VI employed, individuals with VI continue to remain unemployed at greater rates than persons without disabilities.

### **Benefits of Access to VR Services for Individuals with VI**

Employers lack knowledge of how individuals with VI perform job tasks, and on average, they possess negative attitudes towards employees who are blind or visually impaired (McDonnall et al., 2014; McDonnall et al., 2015; McDonnall & Cmar, 2022). In one study, only 32.5% of employers could identify one or more ways in which an employee with VI could complete job tasks (McDonnall et al., 2014). However, employer communication with VR has been found to improve employer knowledge, hiring, and attitudes towards employees with VI (McDonnall et al., 2014; McDonnall et al., 2015; McDonnall & Cmar, 2022). This is significant because it illustrates that when employers are in contact with VR agencies, they are more likely to know how to support employees who are blind or visually impaired.

Researchers Geisen and Hierholzer (2016) studied VR consumers with VI who were social security disability income (SSDI) beneficiaries and found they had increased odds of competitive employment when they received job-related services through VR, and VR counseling and guidance. They defined job-related services as; job placement and search assistance, on-the job supports, job-readiness training, and on-the job training. All job-related

services, with the exception of job-readiness training, increased recipients odds of securing competitive employment. Recipients of job placement and search assistance, on the job supports, and on-the job training experienced increased odds of competitive employment ranging from 78% to 306% depending on the job-related service. Furthermore, recipients of VR counseling and guidance had 32% increased odds of competitive employment compared to those who did not have these services (Giesen & Hierholzer, 2016).

### **Inequities in Access to VR Services**

One factor that impacts access to VR services is consumers' race or ethnicity (Capella, 2002; Giesen et al., 2004; Yin et al., 2021). In 1992, Congress amended the Rehabilitation Act of 1973, and acknowledged the inequities that occurred in the state-federal VR system for traditionally underrepresented populations (Rehabilitation Act, 1973). However, despite the acknowledgment of these inequities and amendment to the Rehabilitation Act of 1973, minority groups continued to receive VR services at a rate disproportionately lower to individuals who are white 10 years later (Capella, 2002).

There is limited current data on the inequities to accessing VR services. In 2002, White applicants with complex needs were 1.5 times more likely to be accepted for VR services than African American applicants with the same education level and severity of disability (Capella, 2002). However, around the same time, access percentages for VR services for consumers who were legally blind, were higher for African Americans, lower for White individuals and about the same for Native Americans, Asian Americans, and Hispanic Americans. These access percentages were proportionate to persons of the same race and ethnicity in the general population with VI (Giesen et al., 2004).

A recent study by Yin et al. (2021) examined racial differences in each step of the VR process—application, eligibility, service provision, and employment outcomes at closure. Their study analyzed data from multiple sources, focusing on individuals ages 15-64 falling

into one of six categories representing the individuals “primary impairment at application” (p. 16): hearing, vision, physical, mental, self-care, and independent living limitations. At the application step, White individuals with disabilities were less likely to apply for services than African American, Native American/Alaska Native, and Hispanic individuals, and more likely to apply than Asian individuals. In the remaining three steps of the VR process, White applicants had higher rates in eligibility, service provision, and employment outcomes at closure than individuals belonging to African American, Native American/Alaska Native, and Hispanic backgrounds, and lower rates than Asian applicants.

Drawing from the U.S. Department of Education’s Rehabilitation Services Administration Case Service Report (RSA-911) database, Cimera et al. (2015) examined 2,543 cases closed by the state-federal VR program in 2012. Cases examined were of transition-aged youth (e.g., 16-25 years old) with VI and blindness. One finding underscoring the importance of access to VR services, as well as highlighting inequities in access to services, was that participants who achieved competitive employment received a higher number of VR services than those with unsuccessful employment outcomes. Upon review, men were more likely to attain competitive employment than women, participants ages 23-25 were more likely to attain competitive employment than those ages 16-18, and Hispanic participants were more likely to attain employment than White participants. Additional differences regarding race or ethnicity in terms of employment outcomes were not found. More research is needed to identify inequities in the quantity and quality of VR services received.

### **Why Differences in State Eligibility Criteria Matter**

Prior research has documented the interstate differences in eligibility criteria for school-aged individuals receiving special education services under the Individuals with Disabilities in Education Act (IDEA; Dragoo, 2020). Also, interstate differences in eligibility



criteria for the specific categories of VI, including blindness, and deafblindness have been documented (Schles & Travers, 2023; Travers & Schles, 2023). Given the variation between states within the eligibility criteria for special education services for students with VI, and the lack of data on VR eligibility criteria, research is needed to understand the current variability in VR eligibility criteria for adults with VI.

To address the knowledge gaps surrounding variations in state eligibility criteria for VR services for individuals with VI, including blindness, I asked the following research questions: (1A) What are the eligibility criteria for VR services for adults with VI at the state level in the United States? (1B) What do VR representatives report are their states' eligibility criteria? (1C) Are there differences between the eligibility criteria listed in state policy documents and the criteria reported by VR representatives? and (2) What are the perceptions of VR representatives related to their states' eligibility criteria for VR services for adults with VI?

## **Method**

### **Survey Sample and Data Collection Procedures**

We developed a national survey to understand the variability in eligibility criteria and services for VR consumers with VI across all U.S. states and territories. A total of 20 states participated in this study. The region most represented in this study was the West. A total of seven participants were from the West (Arizona, Colorado, Idaho, Montana, Nevada, Utah, and Wyoming). The Midwest and Northeast were equally represented, with a total of five states participating in the study from each region. The region most underrepresented in this study was the South, with three states (Florida, Maryland, and Tennessee) participating in the study (U.S. Census Bureau, 2021). Eligible survey participants included representatives from U.S. state and territory VR agencies. All survey respondents were VR program administrators, directors, or supervisors. Example titles included: "Program Administrator",

“Bureau Chief”, and “Vocational Rehabilitation Counseling Supervisor”. The survey was approved by the Institutional Review Board at Vanderbilt University and conducted through Research Electronic Data Capture (REDCap; Harris et al., 2009). Data collection ran from October 2023 through January 2024.

### **Recruitment**

Recruitment emails were distributed to VR representatives by members of the research team. The email invitation included a description of the survey detailing the purpose of the study and an invitation to complete the online survey. Alternatively, representatives could submit their state’s eligibility criteria documents directly to a research team member and forgo completing the full survey. Email recipients were encouraged to share the survey announcement with colleagues who were potentially eligible to participate. Email invitations were sent to each U.S. state, territory, and Washington, D.C. When the research team was unable to find a direct contact for a state VR agency via a public VR website, other contacts such as Ex Officio Trustees from the American Printing House for the Blind (APH) were emailed or called. Calls were made to a general informational phone number for the agency if listed. On average, three follow-up emails were sent, and two follow-up phone calls were made per state (range 1-4).

### **Survey Instrument Development**

The survey tool was collaboratively developed by the author and experts in the field, Dr. Rachel Schles and Dr. Hilary Travers. Dr. Schles is the Coordinator of the Visual Disabilities Program and Assistant Professor of the Practice of Special Education at Peabody College of Vanderbilt University. Dr. Travers is a Research Assistant Professor of Special Education and Principal Investigator of Transition Tennessee at Peabody College of Vanderbilt University. Tiffany Kelley, Sensory Area Director, from the Tennessee Department of Human Services, also consulted on the development of the survey tool, via

conversation, providing feedback as to how questions regarding job title, caseload size, and consumer connection to VR services should be phrased. Revisions were made accordingly, with some questions changing from dropdown selections to write-in responses.

### **Main Survey**

The survey consisted of six sections containing questions about consent, demographic information, determination for eligibility, current services, caseload size, and referrals.

Respondents were asked to answer all questions concerning adult VR services only, not Pre-Employment Transition Services (Pre-ETS). See Appendix A for a copy of the full survey.

### **Research Question 1A: State Eligibility Criteria**

Research Question 1 was divided into three components, A, B, and C. Part A examined eligibility criteria documents received from 19 states. To analyze the eligibility criteria, I created twelve variables that were thematically grouped by headings: legal components, word choice, qualifying conditions, and assessment components.

***Legal Components.*** To capture the legal aspects of a state's eligibility criteria, one dichotomous (yes / no) variable was created: Are the eligibility criteria for VR services general to all disability types or specific to individuals with VI?

***Word Choice.*** One qualitative variable was developed to capture the terminology used in each state's eligibility criteria used to describe VI. Terminology included terms such as "visual impairment," "blindness," "legally blind," "partially sighted," and "low vision".

***Qualifying Conditions.*** Seven unique variables were created to represent the different types of qualifying visual conditions and impact of VI stated in eligibility criteria. Four variables were coded as dichotomous (yes / no) based on whether states' criteria mentioned qualifying visual conditions and if the individual's disability posed a substantial barrier to employment and/or activities of daily living. These variables were (1) was visual field restriction mentioned in a state's eligibility criteria?; (2) were progressive visual conditions

mentioned in a state's eligibility criteria?; (3) did a state's eligible criteria mention that an individual's VI must pose a substantial barrier to employment?; and (4) did an individual's VI impact their activities of daily living (ADL)?

The three remaining variables in this group were coded as categorical. The first related to use of the better eye when determining eligibility. Three codes were developed: N = state eligibility criteria did not base eligibility off functional vision in the better eye, Y = state eligibility was based off functional vision in the better eye, and Y\* = state eligibility was based off functional vision in the better eye or total blindness in one eye. The second categorical variable related to visual acuity thresholds (e.g., acuity must be worse than 20/50 or 20/70). The third and final variable related to visual field restriction thresholds (e.g., 60° or 20°).

***Assessment Components.*** Three variables related to assessment components were coded. Two variables were dichotomous (yes / no) based on (1) if a state's eligibility criteria mentioned assessments at all, and (2) if educational data were mentioned and considered during the eligibility determination process. The third assessment component variable addressed eye reports. Three codes were developed for this variable: 0 = the eligibility criteria did not mention or require an eye report for an individual to be found eligible for services, 1 = eye reports were sometimes considered, and 2 = eye reports were always considered.

### **Research Question 1B: Eligibly Criteria Reported by VR Representatives**

Research question 1B examined information we received from twelve VR representatives who answered questions about their state's eligibility criteria by completing our REDCap survey. Of the 12 REDCap surveys we received, 10 (Arizona, Florida, Idaho, Iowa, Minnesota, Nevada, Ohio, Pennsylvania, Tennessee, and Utah) were completed in full and two (Missouri and Montana) were partially completed. Partial survey responses were

retained in RQ 1B analyses, as both respondents answered questions regarding eligibility determination for VR services. Responses were coded using the three assessment component variables described in RQ 1A. In addition, a fourth dichotomous (yes/no) variable was developed in which respondents were asked if their state used the Social Security Administration's (SSA) definition of VI including blindness to determine eligibility for VR services (responses were restricted to yes/no). The SSA considers an individual to be blind if "vision can't be corrected to 20/200 in your better eye" or if one's visual field is "20 degrees or less in your better eye for a period that lasted or is expected to last at least 12 months" (1935). Finally, a fifth qualitative variable was developed for respondents to write-in their states definition of VI including blindness, if not the SSA definition.

### **Research Question 1C: Comparison of Eligibility Documents to Representative Reported Criteria**

Research question 1C compared the state eligibility criteria identified in 11 state's eligibility documents to the state eligibility criteria identified by VR representatives in the REDCap survey responses. One state, Florida, was excluded from RQ 1C analysis, as we did not receive their correct eligibility documentation. The 11 states included in RQ 1C analysis included Arizona, Idaho, Iowa, Minnesota, Missouri, Montana, Nevada, Ohio, Pennsylvania, Tennessee, and Utah. Responses were coded using the same three assessment components used in RQ 1A and the SSA variables used in RQ 1B. See Table 3 for a state-by-state comparison of state eligibility documents to self-reported eligibility via survey response.

### **Research Question 2: Survey Respondents' Perceptions and Referrals**

For research question 2 I examined survey responses from ten states to understand the perceptions of VR representatives related to eligibility criteria for VR services for adults with VI. Analysis was limited to survey respondents who completed the survey in full.

Therefore, Missouri and Montana were removed from RQ 2 analysis. Below I provide detail about each of the 11 variables created.

### ***Participant Demographics***

Participants were asked their job title, as well as to indicate what state/territory they currently worked in. There were 57 options to select from. All 50 U.S. states, Washington D.C., American Samoa, Guam, Northern Marina Islands, U.S. Outlying Islands, U.S. Virgin Islands, and Puerto Rico.

### ***Perception of Criteria***

**Eligibility Inclusivity.** Participants were asked if they found their states' eligibility criteria for VR services to be inclusive enough so that all persons with VI could receive services. Respondents had two options to select from, yes and no. If respondents selected "no", they had the option to write-in why they found their state's criteria to be exclusive to select individuals with VI.

**Representation.** Participants were asked if there were any groups of persons receiving VR services in their state who may be underrepresented. Respondents had two options to select from, yes and no. If participants selected "yes", they were asked to write-in what groups were underrepresented.

**Bias.** Participants were asked if they noted any biases or trends in their state's eligibility process for persons with VI. Respondents had two options to select from, yes and no. If participants selected "yes", they were asked to write-in what biases or trends they noticed.

### ***Consumer Connection to VR***

**Referral Methods.** Participants were asked to indicate the three most common ways clients were connected to VR services in their state. The participants had seven options to select from: (1) Doctor/medical center, (2) Veterans' Administration, (3) School/teacher, (4)

Pre-ETS provider, (5) Self-referral /Family member, (6) Unsure/I don't know, and (7) Other. If participants selected "other" they were asked to write-in how clients were connected to VR services in their state. Participants were asked the question 3 times so they could report the first, second, and third most common ways clients were connected to VR services in their state.

### **Data Analysis**

To address research questions 1A, 1B, 1C, and 2, I analyzed the survey results using the following procedures. Variable coding for research question 1A was carried out by three members of the research team and interobserver agreement (IOA) was achieved. For the purposes of this study, IOA was achieved when the team was in 100% agreement. Initially, the author developed a codebook, and the three coders met to train and come to agreement on the coding of six states. Once 100% agreement was achieved, the three coders independently coded the remaining 13 states using the established codes. The research team reconvened and found inconsistencies in coding, as the initial codes created did not adequately represent the data. Therefore, the codebook was revised by the research team. After revision of the codebook, the team separately coded, met again, and unanimous agreement was achieved across all states and variables.

Variable coding for research question 1C was completed by the author. I used descriptive statistics to calculate frequency and percentages for survey responses to questions 1A, 1B, 1C, and 2. I used in-vivo coding for qualitative survey responses to use survey respondents exact words/responses as codes (Saldaña, 2016).

## **Results**

### **Research Question 1A: State Eligibility Document Criteria**

Respondents from 20 states submitted their VR eligibility criteria document to a research team member or uploaded this same document to the REDCap survey. However,

one state was excluded from RQ 1A analysis as the incorrect eligibility document was uploaded in the survey. Therefore, I coded eligibility criteria from 19 states. See Table 1 for a state-by-state breakdown of legal components, qualifying conditions, and assessment conditions.

### ***Legal Component***

Of the 19 eligibility criteria documents received, nine (47%) documented general VR eligibility, spanning all disability types, with minimal or no specific mention of individuals with VI. Only two states, South Dakota, and Wyoming, included terminology inclusive of individuals with VI. Separately, 10 states (53%) submitted VR eligibility criteria that were specific to individuals with VI in their entirety or included sections that specifically addressed individuals with VI.

### ***Word Choice***

One qualitative variable was developed to analyze states' use of language relevant to individuals with VI within their eligibility criteria. Seven states' (37%) eligibility criteria did not contain any language specific to individuals with VI. Twelve states' (63%) criteria contained language specific to individuals with VI. A total of eleven different terms were found in states' eligibility criteria. The most commonly used term was "visual impairment," used by eight of twelve states. Additionally, six other terms were each referenced once. These included "blind," "functionally blind," "low vision," "total blindness," "visual disability," and "visually impaired." See Table 2 for terminology used in each state's eligibility criteria.

### ***Qualifying Conditions***

Nine states' (47%) eligibility criteria contained visual acuity and visual field thresholds. Visual acuities ranged from 20/50 to 20/200, with 20/70 being the most frequent (n = 4).



Over half (n = 10) of the state eligibility criteria documents received did not mention or include use of the better eye when determining eligibility. Seven states included use of the better eye when determining eligibility. Two states, Missouri, and Tennessee required use of the better eye or total blindness in one eye to be eligible for services.

A majority of states' eligibility criteria (63%) did not include language around eligibility for individuals whose visual conditions were progressive but who may not currently meet eligibility criteria. Seven states' criteria (37%) included progressive visual conditions when determining eligibility for services.

Fifteen states' (79%) eligibility criteria mentioned or required that an applicant's disability pose a barrier to employment to be eligible for services; four states' (21%) criteria did not mention or require this. In contrast, only four states (21%) mentioned or required that an applicant's disability adversely impact their ADL to be eligible for services; 15 states' criteria (79%) did not mention or require this.

### ***Assessment Components***

Twelve states' eligibility criteria (63%) required or mentioned some form of assessment for the determination of VR services. Of these 12 states, seven required a medical or eye report, three considered a medical or eye report when available, and two did not require a medical or eye report to be on file. A majority of states 63% did not include language around considering educational documents when determining eligibility. Educational records for the purpose of this study included IEPs, Individualized Transition Programs (ITPs), and FVAs.

**Table 1**

*A State-by-State Breakdown of the Use of Legal Components, Qualifying Conditions, and Assessment Conditions in Eligibility Criteria.*

| State         | Legal Components |         |            | Qualifying Conditions |           |      |         | Assessment Components |        |         |      |
|---------------|------------------|---------|------------|-----------------------|-----------|------|---------|-----------------------|--------|---------|------|
|               | VI SPECIFIC      | BET EYE | ACU THRESH | VF                    | FD THRESH | PROG | BARRIER | ADL                   | ASSESS | EYE RPT | EDUC |
| Arizona       | Y                | N       | N          | N                     | N         | N    | Y       | N                     | Y      | 2       | N    |
| Colorado      | N                | N       | N          | N                     | N         | N    | Y       | N                     | Y      | 2       | Y    |
| Idaho         | Y                | Y       | 200        | Y                     | 20        | N    | Y       | Y                     | Y      | 2       | Y    |
| Iowa          | Y                | Y       | 70         | Y                     | 20        | Y    | Y       | Y                     | Y      | 2       | Y    |
| Maine         | Y                | N       | N          | N                     | N         | N    | Y       | N                     | N      | 0       | N    |
| Maryland      | N                | N       | N          | N                     | N         | N    | Y       | N                     | N      | 0       | N    |
| Minnesota     | Y                | Y       | 60         | Y                     | §         | Y    | Y       | N                     | Y      | 1       | Y    |
| Missouri      | Y                | Y*      | 60         | Y                     | 20        | Y    | Y       | N                     | Y      | 2       | N    |
| Montana       | N                | N       | N          | N                     | N         | N    | Y       | N                     | N      | 0       | N    |
| Nevada        | N                | N       | N          | N                     | N         | N    | Y       | N                     | Y      | 0       | Y    |
| New Hampshire | N                | N       | N          | N                     | N         | N    | Y       | N                     | N      | 0       | N    |
| New Jersey    | Y                | Y       | 70         | Y                     | 20        | N    | N       | Y                     | N      | 0       | N    |
| Ohio          | N                | N       | N          | N                     | N         | N    | Y       | N                     | N      | 0       | N    |
| Pennsylvania  | Y                | Y       | 70         | Y                     | 20        | Y    | N       | N                     | Y      | 2       | N    |
| South         | N                | N       | N          | N                     | N         | N    | Y       | Y                     | Y      | 1       | Y    |
| Dokota        |                  |         |            |                       |           |      |         |                       |        |         |      |
| Tennessee     | Y                | Y*      | 50         | Y                     | 40        | Y    | N       | N                     | Y      | 2       | N    |
| Utah          | Y                | Y       | 70         | Y                     | 30        | Y    | N       | N                     | N      | 0       | N    |
| Vermont       | Y                | Y       | 50         | Y                     | 20        | Y    | Y       | N                     | Y      | 1       | Y    |
| Wyoming       | N                | N       | N          | N                     | N         | N    | Y       | N                     | Y      | 0       | N    |

*Note.* VI SPECIFIC = eligibility criteria is specific to individuals with visual impairments; BET EYE: better eye considered; ACU THRESH: visual acuity threshold provided; VF = visual field included; FD THRESH = visual field threshold provided; PROG = progressive conditions included; BARRIER = barrier to employment; ADL = activities of daily living; ASSESS = assessment included in criteria; EYE RPT = eye report included; EDUC = educational documents considered; Y = Yes; N = No; 0 = eye report not mention nor required; 1 = eye report is sometimes considered; 2 = eye report is always considered

\*Missouri and Tennessee consider the better eye for eligibility purposes or total blindness in one eye

§Minnesota did not specify a certain degree of field restriction, but rather “1 full quadrant”

**Table 2***Terminology Used in States' Eligibility Criteria Specific to Individuals with VI*

| <b>State</b> | <b>Word Choice</b>                               |
|--------------|--|
| Idaho        | visual impairment, blindness, functionally blind |
| Iowa         | low vision, legal/legally blind, blind           |
| Maine        | visual impairment                                |
| Minnesota    | visual impairment, legal blindness               |
| Missouri     | visual disability, vision loss, blindness        |
| New Jersey   | visually impaired, legally blind                 |
| Pennsylvania | vision loss, visual impairment                   |
| South Dakota | visual impairment, legal blindness, blindness    |
| Tennessee    | vision loss, legal blindness, total blindness    |
| Utah         | visual impairment, legal blindness, blind        |
| Vermont      | visual impairment, legally blind                 |
| Wyoming      | visual impairment, blindness                     |

**Research Question 1B: Eligibility Criteria Reported by VR Representatives***Assessments*

All twelve survey respondents reported the use of assessments to determine eligibility. Furthermore, all twelve survey respondents reported the use of eye reports when determining eligibility for VR services. Nine (75%) survey respondents reported the consideration of educational data when determining eligibility.

*Use of the SSA's Definition*

Eight survey respondents (67%) indicated that they do not use the SSA's definition of VI including blindness to determine eligibility for services and provided a written response to clarify. Respondents from three states reported they do not have a state definition of VI or blindness they adhere to for eligibility determination purposes. Two of these three states reported an applicant must show a need for VR services. The last state did not report a definition of VI or blindness for eligibility, nor did they mention applicants must show a need for VR services. Instead, they wrote: "*We do not have a state adopted definition. Different programs throughout the state use different definitions.*" The remaining five respondents who provided written responses, used broader eligibility criteria than the SSA definition,

mentioning progressive visual conditions, lack of binocular vision, low vision, and functional limitations due to VI.

### **Research Question 1C: Comparison of State Eligibility Documents to VR**

#### **Representative Survey Responses**

Below, I summarize the findings comparing the eligibility criteria listed in state documents to those reported by VR representatives for 11 states.

#### ***Assessments***

All eleven survey respondents reported the use of assessments to determine eligibility for services. However, only eight (73%) eligibility criteria documents included the use of assessments. In the examination of responses, all survey respondents reported the consideration of eye reports when determining eligibility for VR services. Reviewing eligibility criteria documents submitted by states, only six (64%) states sometimes or always considered an eye report when determining eligibility for services. Differences in the use of assessments were further identified in the consideration of educational records/data to determine eligibility. Eight survey respondents reported the use of educational materials while only four states referenced the use of educational materials in their eligibility documents.

#### ***Word Choice***

I identified conflicting information related to qualifying conditions, such as visual acuities and visual field thresholds used to determine eligibility for services between responses from VR representatives and states' eligibility documents. Information captured in the survey and in eligibility documents was consistent for just six states (55%) regarding visual acuities and visual field thresholds.

Five states' survey responses and eligibility documents varied regarding visual acuities and visual field thresholds used to determine eligibility for services (Arizona, Idaho,

Minnesota, Missouri, and Pennsylvania). Four states' survey response and eligibility documents considered visual acuity and visual field thresholds. However, two states' survey responses provided broader visual acuity and visual field threshold criteria than their eligibility document. Alternatively, two states' survey responses provided narrower visual acuity and visual field threshold criteria than mentioned in their states' eligibility documents. Lastly, one state's criteria documented in the eligibility document was notably different from the criteria reported by the VR representative. This state's eligibility document contained criteria broader than the SSA definition. Then, in their survey response, this state reported that they do not have a state adopted definition and that VR programs throughout the state use different definitions.

Table 3

*State-by-State Comparison of Eligibility Criteria from State Documents Versus Criteria Reported by VR Representatives.*

| State        | SSA1 <sup>A</sup> | SSA1 <sup>C</sup> | SSA1 <sup>C</sup><br>Write-<br>In | Assess1 <sup>A</sup> | Assess1 <sup>C</sup> | Eyerpt1 <sup>A</sup> | Eyerpt1 <sup>C</sup> | Educ1 <sup>A</sup> | Educ1 <sup>C</sup> |
|--------------|-------------------|-------------------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|--------------------|--------------------|
| Arizona      | N                 | Y                 | ~                                 | Y                    | Y                    | 2                    | 2                    | N                  | Y                  |
| Idaho        | Y                 | N                 | Y                                 | Y                    | Y                    | 2                    | 2                    | Y                  | Y                  |
| Iowa         | N                 | N                 | Y                                 | Y                    | Y                    | 2                    | 2                    | Y                  | Y                  |
| Minnesota    | N                 | N                 | Y                                 | Y                    | Y                    | 1                    | 2                    | Y                  | N                  |
| Missouri     | N                 | Y                 | ~                                 | Y                    | Y                    | 2                    | 2                    | N                  | N                  |
| Montana      | N                 | N                 | Y                                 | N                    | Y                    | 0                    | 2                    | N                  | Y                  |
| Nevada       | N                 | N                 | Y                                 | Y                    | Y                    | 0                    | 2                    | Y                  | N                  |
| Ohio         | N                 | N                 | Y                                 | N                    | Y                    | 0                    | 2                    | N                  | Y                  |
| Pennsylvania | N                 | Y                 | ~                                 | Y                    | Y                    | 2                    | 2                    | N                  | Y                  |
| Tennessee    | N                 | N                 | Y                                 | Y                    | Y                    | 2                    | 2                    | N                  | Y                  |
| Utah         | N                 | N                 | Y                                 | N                    | Y                    | 0                    | 2                    | N                  | Y                  |

*Note.* <sup>A</sup> = refers to the state eligibility document; <sup>C</sup> = refers to the VR representative survey response; SSA1 = use of Social Security Administration's definition in eligibility document; SSA1<sup>C</sup> Write-In = written response including state definition of VI including blindness ASSESS = assessment(s) are used to determine eligibility; EYERRT = an eye report is considered for eligibility; EDUC = educational records are considered for eligibility; Y = yes; N = no; 0 = eye report not mention nor required; 1 = eye report is sometimes considered; 2 = eye report is always considered; ~ = information unavailable

**Research Question 2: Survey Respondents' Perceptions**

I analyzed responses from 10 states to answer RQ 2.

***Respondents' Perceptions of State Eligibility Criteria and Referrals***

**Inclusivity.** Nine survey respondents (90%) indicated that their eligibility criteria were inclusive enough so that all interested individuals with VI could receive services. The single state that did not feel their criteria were inclusive stated:

“We are in the process of updating our eligibility criteria through our rule change. We intend to make it more inclusive to ensure all customers who have barriers to employment based on any kind of vision loss are able to obtain services. For instance, individuals with Cortical Visual Impairments are difficult to determine eligible even though we know they would benefit from services.”

**Representation and Bias.** Seven survey respondents (70%) reported that there are groups of individuals who are not receiving VR services in their state. All seven respondents shared which groups are underrepresented in their state. Three respondents reported individuals living in rural areas were an underrepresented group. Persons who are deafblind, Asian, Hispanic, and minority populations with vision loss were each mentioned as underrepresented groups receiving services. Each group was mentioned by two survey respondents. Finally, individuals with complex needs, [individuals with] mental health [conditions], and Native-Americans were each mentioned once. When asked if they noticed any biases or trends in their states' eligibility process, all ten respondents said no.

**Referrals.** Respondents were asked the first, second, and third most common way clients access VR services in their state. The most common way clients become connected to VR services was through a self-referral/family member. The second most common way was through

school/teacher, and the third most common way was through a doctor/medical center. Table 4 summarizes respondents' answers. Pre-ETS was only mentioned once as the second most common way clients are connected to VR services. Additionally, connection to VR services through the Veteran's Administration was not mentioned by any respondents.

Respondents also had the option to select "Other" and write-in the method clients are connected to VR services. One respondent selected "Other" for all three ways in which clients are connected to VR services and wrote-in, "*Varies- friends, family, universities, doctors, outreach, etc.*" Another respondent selected "Other" regarding the third most common way clients are connected to VR services and wrote, "*NFB, AFB, contracted vision provider.*"

**Table 4**

*Most Common Referral Methods Reported by Survey Respondents*

| <b>Referral Method</b>                                | <b>1<sup>st</sup> (n)</b> | <b>2<sup>nd</sup> (n)</b> | <b>3<sup>rd</sup> (n)</b> | <b>Total %</b> |
|---|---------------------------|---------------------------|---------------------------|----------------|
| Self-Referral/Family Member                           | 5                         | 2                         | 1                         | 27%            |
| Doctor/Medical Center                                 | 2                         | 2                         | 3                         | 23%            |
| School/Teacher  | 1                         | 3                         | 3                         | 23%            |
| Other   | 1                         | 1                         | 2                         | 13%            |
| Unsure/I don't know                                   | 1                         | 1                         | 1                         | 10%            |
| Pre-Employment Transition Services Provider (Pre-ETS) | 0                         | 1                         | 0                         | 3%             |
| Veteran's Administration                              | 0                         | 0                         | 0                         | 0%             |

*Note.* Percentage does not equal 100% due to rounding.

### **Discussion**

The primary purpose of this study was to document interstate variability in eligibility criteria for adult VR services for individuals with VI including blindness. A second purpose of the study was to gather information on state VR representatives' perceptions of their states' eligibility criteria and the methods by which clients are connected to VR services. Findings



revealed that there is interstate variability in eligibility criteria for VR services. Furthermore, there is preliminary evidence of intrastate differences in criteria regarding the definition of VI including blindness.

### **Potential Impacts of VR Eligibility Variation for Consumers**

While there are similarities between some states, there are also notable differences between others. Several states such as Iowa, Tennessee, and Vermont had similar criteria within their states' eligibility documents. All three states' criteria were specific to individuals with VI, considered use of the better eye or total blindness in one eye as well as progressive visual conditions, and required some form of assessment when determining eligibility. However, criteria identified in eligibility documents also varied between states. For example, Idaho required a visual acuity of 20/200 or worse and a visual field threshold of 20 degrees or less. However, Utah had markedly different criteria, considering individuals eligible if their acuity is 20/70 or worse and/or a visual field threshold of 30 degrees or less. These differences are important for consumers of VR services to be aware of. Given the range of potential criteria, individuals with VI may choose to live in one state over another, or not be aware of changes in services if they move across state lines. One should not be confined to a particular state due to inequitable eligibility criteria for VR services.

The most common method in which clients were connected to VR services was through a self-referral/family member. This finding reiterates the importance of the general population knowing states' eligibility criteria for VR services. For instance, if an applicant's state requires an eye report to determine eligibility for services, one must then find the means to obtain an eye report. This in and of itself can pose a barrier to accessing VR services. Cost, trust, communication, clinic accessibility (distance/transportation), and doctor-patient relationship have been identified as barriers to eye care for individuals with high-risk status, those at risk for

vision loss/underutilizing eye care, those living in rural areas, or those with low socioeconomic status (Elam & Lee, 2014). In the current study, survey respondents reported individuals living in rural areas as the most underrepresented, followed by persons who are deafblind, Hispanic, Asian, and minority groups with vision loss. More research is needed to determine if lack of access to obtaining an eye report or other assessment materials used for eligibility purposes creates a barrier for individuals interested in VR services, especially from rural areas.

### **Potential Impacts of VR Eligibility Variation for VR Agencies and Counselors**

When determining eligibility for services, VR counselors must have “clear and convincing evidence” before finding an individual incapable of benefiting from services in terms of an employment outcome (OSERS, 2024). Given the variability in assessments used to determine eligibility, it is imperative that counselors be well versed on their states’ assessments used to collect “clear and convincing evidence” when determining eligibility for services. According to OSERS, the determination of eligibility, specifically that the applicant requires VR services to prepare for or maintain employment, is the responsibility of a qualified VR counselor. Charged with this responsibility, VR counselors must be familiar with their own states’ eligibility criteria and what constitutes requiring VR services to make an informed decision. If unaware of their own states’ criteria, VR counselors may inadvertently find adults who require services ineligible.

In addition to understanding their states’ eligibility criteria, VR counselors, as the primary individual responsible for determining eligibility, should seek to understand the range of unique impacts a VI can pose (OSERS, 2024). Research has shown that a majority of individuals with VI and blindness are older than 40 years (Flaxman et al., 2021). Additionally, one study examining VR applicants from three states found the average age of potential consumers to be

44.2 years old (Clapp et al., 2020). There are many visual conditions including retinitis pigmentosa, age-related macular degeneration, and cataracts that can be progressive and do not manifest until late adolescence or adulthood (CDC, 2023; Hamel, 2006). In the present study, seven states' (37%) eligibility criteria included individuals with progressive visual conditions. Therefore, VR counselors must be knowledgeable of a variety of visual conditions, including those that are progressive, as they may encounter individuals who acquired their VI as an adolescent or adult. Research is needed to identify the preparedness of VR counselors to serve consumers with VI and blindness, especially those with progressive visual conditions.

VR representatives in this study did not report any findings of bias or trends in their states' eligibility process. Furthermore, nearly all respondents (90%) found their eligibility criteria to be inclusive enough so all persons with VI could access services. Yet, seven (70%) survey respondents reported underrepresentation of groups receiving services in their state. Research has shown that there are racial differences within steps of the VR process-application, with minority groups having lower rates of eligibility, service, and employment (Yin et al., 2021). This study also found minority groups to be underrepresented in their states' VR agency. More research is needed to identify if variability in criteria impacts acceptance for VR services for individuals with VI belonging to minority groups.

### **Potential Impacts of VR Eligibility Variation for Schools**

Self-referral/family member was the most frequent method of referral for VR services reported in this study. School/teacher and doctor/medical center were the second and third most frequently reported methods of referral for VR services in this study, respectively. Alternatively, Pre-ETS providers were mentioned only once as a popular method of referral. This finding was surprising as Pre-ETS providers function as VR staff in school settings. These staff can provide

critical linkages for students and families as they transition from school-based to adult service systems (Awsumb et al., 2020). More research is needed to understand how persons with disabilities access adult services, and who, if anyone, is responsible for proactively identifying candidates for VR services in school settings.

### **Potential Impact of VR Eligibility Variation for Employers**

Research has shown that employer communication with VR can improve employer knowledge, hiring, and attitudes towards employees with VI (McDonnall et al., 2014, McDonnall et al., 2015, McDonnall & Cmar, 2022). It is important for employers to know of VR, especially when hiring individuals with VI, so they can provide proper workplace accommodations and understand that individuals with VI can complete job tasks. Variability in eligibility criteria is significant to employers/companies if they have employees with VI. This is especially important if their employee has previously received VR services and job support in another state, but not their current state of residence. Further research is needed to examine how employers communicate with VR agencies and traverse instances in which their employee is not eligible for VR services, yet needs job support greater than can be provided by the employer/company.

### **Limitations**

There are several limitations that should be considered along with the findings of this study. First, the eligibility data reported in this study represents only a third (35%) of U.S. states and territories. Additionally, we had an even smaller response rate, 21% (n = 12), for the survey itself. Given the variability that existed within our small sample, we cannot generalize and make assumptions about the variability between states that were not included. Second, state regulatory and policy documents are subject to change over time. Therefore, the data presented here only

capture VR criteria in effect in late 2023/early 2024. Readers should check their state's VR website or contact a representative for the most up-to-date information.

### **Implications for Future Research**

Individuals with VI including blindness represent a low incidence, heterogeneous population. Research has shown that there are differences in client characteristics, services provided, and cost across states for adult VR services (Clapp et al., 2020). Furthermore, research has shown that age, race, and severity of VI impact employment outcomes (Cimera et al., 2015). An amalgamation of these challenges is the fact that no universal eligibility criteria for VR services and operational definition of VI including blindness exists.

For future replication of this study, I recommend contacting state VR agencies or APH Ex. Officio Trustees via phone call when applicable to enhance the recruitment process. In this study, research team members experienced greater success in reaching potential survey participants via phone call as opposed to direct email. When information is available, I recommend directly contacting a VR representative or individual as opposed to contacting a general email or phone number. Finally, I encourage future researchers to be conscientious of time zones, and language when emailing or calling potentially eligible survey participants.

The findings of this study highlight interstate variability in eligibility criteria for adult VR services. Only twenty states participated in this study. Further research should extend these findings and review eligibility documents from all U.S. states and territories. A comprehensive understanding of states' eligibility criteria for adult VR services is needed to identify inequities more fully within state criteria and VR services. Additionally, an analysis comparing adult VR eligibility criteria to special education eligibility criteria for individuals with VI including blindness is needed (Schles & Travers, 2023). There is no single universal definition of VI

applied at either the school-age or adult level. Therefore, policymakers need to establish consistent or universal criteria so individuals with VI can access support services throughout the lifespan.

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## Appendix A

### Vocational Rehabilitation Study to Understand Eligibility for Clients with Visual Impairment Survey Questions

#### *Consent Questions*

1. I agree to participate in this survey.
  - I agree
  - I do not agree

#### *Demographic Questions*

2. What is your email address?
  - Write-in
3. What is your job title?
  - Write-in
4. What is your state / territory?
  - Drop down menu (50 states, Washington D.C., and territories).

#### *Determining Eligibility for Vocational Rehabilitation Services*

**When answering all future questions, please consider adult VR services only, Pre-Employment Transition Services (Pre-ETS).**

5. What materials or documents does your state consider when determining eligibility for vocational rehabilitation services for individuals with visual impairments?
  - Functional Vision Assessment (FVA)
  - Learning Media Assessment (LMA)
  - Eye Report
  - Interview Component
  - Other
6. If other, please specify:
  - Write-in
7. Do you have a copy of your state's eligibility criteria for vocational rehabilitation services for individuals who are visually impaired or blind?
  - Yes
  - No
8. Please provide a copy of your state's eligibility criteria
  - Upload document
9. Does your state use the following definition of visual impairment including blindness to determine eligibility for VR services?  
\*\*\*" If your vision can't be corrected to better than 20/00 in your better eye, or if your visual field is 20 degrees or less in your better eye for a period that lasted or is expected to last at least 12 months." \*\*\*
  - Yes
  - No

10. Please provide your state definition of visual impairment including blindness.
  - Write-in
11. Do you have a copy of your state's application for vocational rehabilitation services?
  - Yes
  - No
12. Please provide your state's application for vocational rehabilitation services.
  - Upload document
13. If your state has additional or separate application for Blind VR services, please upload a copy here.
  - Upload document

### ***Current Services and Caseload Sizes for Vocational Rehabilitation***

14. How many clients currently have an open case with vocational rehabilitation in your state?  
\*\*\*Note: This is the total number of individuals, regardless of disability type, not just individuals with visual impairments.\*\*\*
  - Write-in
15. How many clients with visual impairments currently have an open case with vocational rehabilitation in your state?
  - Write-in
16. In your state, how are clients with visual impairments distributed among vocational rehabilitation counselors?
  - One VR counselor serves all clients with visual impairments.
  - Clients with visual impairments are distributed evenly among VR counselors.
  - Clients with visual impairments are distributed randomly among VR counselors.
  - Some VR counselors serve all clients and some specifically serve individuals with visual impairments.
  - There is no designated manner in which clients with visual impairments are distributed among VR counselors.
  - I do not know.
17. Is there anything you would like to share about how clients with visual impairments are distributed across vocational rehabilitation counselors or how counselor caseload size is determined in your state?
  - Write-in
18. How easy/hard is it to employ visual impairment specialized counselors?
  - Extremely difficult
  - Somewhat difficult
  - Neither hard nor difficult
  - Somewhat easy
  - Extremely easy
  - We do not employ visual impairment specialized counselors.
  - I do not know, I'm not involved in the hiring process.

***Referrals and Connecting with Potential Vocational Rehabilitation Clients***

19. What is the most common way clients get connected to vocational rehabilitation services in your state?
- Doctor/medical center
  - Veteran's Administration
  - School/teacher
  - Pre-Employment Transition Service (Pre-ETS) provider
  - Self-referral/Family member
  - Unsure/I don't know
  - Other
20. If you answered other, please specify:
- Write-in
21. What is the second most common way clients get connected to vocational rehabilitation services in your state?
- Doctor/medical center
  - Veteran's Administration
  - School/teacher
  - Pre-Employment Transition Service (Pre-ETS) provider
  - Self-referral/Family member
  - Unsure/I don't know
  - Other
22. If you answered other, please specify:
- Write-in
23. What is the third most common way clients get connected to vocational rehabilitation services in your state?
- Doctor/medical center
  - Veteran's Administration
  - School/teacher
  - Pre-Employment Transition Service (Pre-ETS) provider
  - Self-referral/Family member
  - Unsure/I don't know
  - Other
24. If you answered other, please specify:
- Write-in
25. How many referrals for vocational rehabilitation services did you receive for potential clients with visual impairments in the past year?
- 0
  - 1-10
  - 11-20
  - 21-30
  - 31-40
  - 41-50
  - 51-60
  - 61-70

- 71-80
  - 81-90
  - 91-100
  - 101-110
  - 11-120
  - 121-130
  - 131-140
  - 141-150
  - 150+
  - I do not know
26. If you received referrals for vocational rehabilitation services for individuals with visual impairments in the past year, what percentage of referrals turned into clients?
- 1%-10%
  - 11%-20%
  - 21%-30%
  - 31%-40%
  - 41%-50%
  - 51%-60%
  - 61%-70%
  - 71%-80%
  - 81%-90%
  - 91%-100%
  - I do not know
27. Please provide an estimated average duration, on how long a case takes from initial contact to eligibility review when serving a client with visual impairment.
- Write-in
28. Please provide an estimated average duration, on how long a case takes from eligibility determination to getting assigned a counselor when serving a client with visual impairment.
- Write-in
29. Does your Veterans Administration have its own vocational rehabilitation services?
- Yes
  - No

### ***Final Questions***

30. Do you think your state's vocational rehabilitation eligibility criteria are inclusive enough such that all persons with visual impairments in your state are able to receive services?
- Yes
  - No
31. What changes do you think need to be made?
- Write-in

32. Are there any groups of persons receiving vocational rehabilitation services in your state who may be underrepresented?
- Yes
  - No
33. Which groups are underrepresented?
- Write-in
34. Have you noted any biases or trends in your state's eligibility process for persons with visual impairment?
- Yes
  - No
35. What biases or trends have you observed?
- Write-in
36. Thank you for completing this survey! Would you be interested in participating in a follow-up interview so we can learn more about your VR referral and service process? We estimate the interview will take approximately 15-30 minutes. If you select yes, we will contact you using the email you provided.
- Yes
  - No
37. Since you selected yes to participate in a follow-up interview, please provide your first and last name.
- Write-in