**John E. Crews Presentation**

Slide 1: **BIG DATA PROJECT, VisionServe Alliance & The Ohio State University, John E. Crews, DPA**

**July 20, 2022**

**Slide 2: What is the Big Data Project? Stand alone state reports estimating the prevalence of blindness and low vison at the state and county level among people age ≥65 years.**

**Stand alone state reports that describe social, economic, health, and quality of life factors among people who are blind and have low vision aged ≥65 years compared to older people without blindness and low vision at the state level.**

**Slide 3: Why the Big Data Project?**

**Slide 4: Give me a lever long enough and a fulcrum on which to place it and I shall change the world. –Archimedes. (Image of a man pushing down on a lever lifting a globe.)**

**Slide 5: Data to Support Advocacy. Successful advocacy activities tell a compelling story**

**Data regarding the prevalence of blindness and low vision among older people is part of the story**

**Data regarding their circumstances are another part of the story**

**Data that are rigorous, comprehensive, and gathered consistently across the nation provide credibility**

**Data provide evidence to support coalition agenda**

**Stories of the human experience of blindness and low vision**

**Slide 6: Who has the data has the power. --Tim O’Reilly**

**Slide 7: Details, Details**

**Slide 8: Aim of Big Data Project, 1. Provide state level data on prevalence of blindness and low vision among people aged 65 years and over. 2. Provide county level estimates of the prevalence of blindness and low vision in each state**

**Slide 9: Aim of the Big Data Project, Provide state level data on people with and without blindness and low vision on: 3. Health 4. Chronic Conditions 5. Health Related Quality of Life 6. Disability Measures 7. Income and Poverty 8. Education**

**Slide 10: Big Data Briefing Organization, Promised 6-8 Page Reports; Delivering 30+ Page Reports; Executive Summary: 1 ½ Page; Context: National level perspective & discussion of vision rehab services: 3 ½ pages; State Level Prevalence; State map showing county level distribution; Chronic Conditions, Health Related Quality of Life, & Disability Measures: 5 pages; Tables: State & county level prevalence; 60 BRFSS variables comparing people with and w/o blindness and low vision.**

**Slide 11: Data Examined: Behavioral Risk Factor Surveillance System (BRFSS). Administered by states, financial support and protocol from CDC ; Samples 440,000 people annually. World’s largest and oldest phone survey; Complex sampling frame; Post survey weighting ; Addresses health behaviors (smoking) and risks (obesity). Used to inform health policy; Provides state (and regional) and aggregated national data annually; American Community Survey. Administered by Census. Five year aggregated data provides county level information**

**Slide 12: Case Definition of blindness and low vision: “Are you blind or do you have serious difficulty seeing, even when wearing glasses?” Both BRFSS and ACS ask the same vision question; Response is yes/no; no scaled response; Neither survey asks about vision rehabilitation; Every survey has limitations**

**Slide 13: Nine Completed Reports: National Report, Pennsylvania, Illinois, Missouri, New York, California, Louisiana, Florida, Oklahoma**

**Slide 14: Findings: National prevalence of blindness and low vision in response to the question “Are you blind or do you have serious difficulty seeing, even when wearing glasses?” is 7.3%.**

**Slide 15: But we know. . . Women are more likely than men to report blindness and low vision: Women: 7.5%, Men: 7.0, Older age groups are more likely to report vision problems: Ages 65-74: 6.3%, Ages 75-79: 7.4%, Ages 80+: 9.8%**

**Slide 16: Blindness and Low Vision Vary by Race Ethnicity: White: 6.1%; Asian: 8.8%; Black: 10.5%; Hispanic: 13.9%; Native American: 14.2%**

**Slide 17: Is Blindness and Low Vision Evenly Distributed across the United States?**

**Slide 18: Big Data Findings: Prevalence. State Level Variability. US Average = 7.3%, Lowest = 5.8%; Illinois; Highest= ????**

**Slide 19: Big Data Findings: Prevalence. State Level Variability. US Average = 7.3%, Lowest = 5.8%; Illinois; Highest= 12.4% Louisiana**

**Slide 20: Prevalence of Vision Impairment among People with and without Vision Impairment, Age 65+, US and 8 States.**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 7.3 | 4 |
| CA | 8.3 | 3 |
| FL | 7.5 | 3 |
| IL | 5.8 | 5 |
| LA | 12.4 | 5 |
| MO | 7.6 | 4 |
| NY | 7.1 | 5 |
| OK | 10.1 | 4 |
| PA | 6 | 4 |

**Slide 21: Is Blindness and Low Vision Evenly Distributed within States?**

**Slide 22: County Level Variability. Missouri as Example: Overall Prevalence of Blindness and Low Vision among people age 65+ is 7.6%; County with lowest prevalence: Osage County—2.6%; County with the highest prevalence: ??????**

**Slide 23: County Level Variability. Missouri as Example: Overall Prevalence of Blindness and Low Vision among people age 65+ is 7.6%; County with lowest prevalence: Osage County—2.6%; County with the highest prevalence: Pemiscot —21.1%**

**Slide 24: Map of state of Missouri showing counties. Counties are shaded to show prevalence of vision impairment by quintiles—ranging from 2.6% to 21.1%**

**Slide 25: Knowing Prevalence is Not Enough!**

**Slide 26: Disparities. Disparities in health, chronic conditions, QoL, disability status, and income define serious disadvantage for most older people with Blindness and Low Vision**

**Slide 27: Chronic Conditions among People Age ≥65 Years with and without Blindness and Low Vision, United States, BRFSS, 2019.**

|  |  |  |
| --- | --- | --- |
|  | Vision Loss | No Vision Loss |
| Stroke | 16.9 | 7.3 |
| Heart Attack | 17.2 | 10.2 |
| Diabetes | 36.4 | 22.1 |
| Depression | 26.9 | 13.9 |
| Hearing Impairment | 33.3 | 15 |

**Slide 28: Stroke among People with and without Vision Impairment, Age 65+, BRFSS, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 17 | 7 |
| CA | 12 | 7 |
| FL | 14 | 7 |
| IL | 10 | 7 |
| LA | 19 | 7 |
| MO | 20 | 9 |
| NY | 17 | 6 |
| OK | 21 | 8 |
| PA | 21 | 8 |

**Slide 29: Diabetes among People with and without Vision Impairment, Age 65+, BRFSS, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 37 | 22 |
| CA | 41 | 22 |
| FL | 34 | 23 |
| IL | 34 | 23 |
| LA | 44 | 25 |
| MO | 27 | 21 |
| NY | 42 | 21 |
| OK | 33 | 24 |
| PA | 40 | 21 |

**Slide 30. Depression among People with and without Vision Impairment, Age 65+, BRFSS, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 26 | 14 |
| CA | 27 | 13 |
| FL | 29 | 13 |
| IL | 20 | 13 |
| LA | 31 | 16 |
| MO | 32 | 15 |
| NY | 23 | 11 |
| OK | 27 | 17 |
| PA | 21 | 8 |

**Slide 31: Serious Difficulty Hearing among People with and without Vision Impairment, Age 65+, BRFSS, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 33 | 15 |
| CA | 32 | 14 |
| FL | 29 | 14 |
| IL | 24 | 12 |
| LA | 44 | 15 |
| MO | 34 | 19 |
| NY | 38 | 12 |
| OK | 36 | 22 |
| PA | 18 | 14 |

**Slide 32: Disparities in Health Related Quality of Life**

**Slide 33: Health Related Quality of Life: BRFSS, 2019, US**

|  |  |  |
| --- | --- | --- |
|  | Blindness and Low Vision | No Blindness or Low Vision |
| Fair/Poor Health | 51.4 | 23.3 |
| Frequent Physical Distress | 35.6 | 15.9 |
| Frequent Mental Distress | 17.9 | 7.3 |
| Frequent Limitations in Activity  | 34.3 | 18.9 |

**Slide 34: Disparities in Disability Measures**

**Slide 35: Disability Measures: US, BRFSS, 2019**

|  |  |  |
| --- | --- | --- |
|  | Blindness/Low Vision | No Blindness/Low Vision  |
| Concentrating Remembering | 29.3 | 8.2 |
| Walking Climbing Stairs | 56.9 | 25.4 |
| Dressing Bathing | 19.1 | 5 |
| Running Errands | 35.3 | 7.7 |

**Slide 36: Could Not Get Care Because of Cost among People with and without Vision Impairment, Age 65+, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 12 | 4 |
| CA | 6 | 3 |
| FL | 11 | 3 |
| IL | 14 | 5 |
| LA | 19 | 5 |
| MO | 10 | 4 |
| NY | 11 | 5 |
| OK | 9 | 4 |
| PA | 6 | 4 |

**Slide 37: Annual Income less than $20,000 among People with and without Vision Impairment, Age 65+, US and 8 States**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 37 | 17 |
| CA | 41 | 20 |
| FL | 35 | 19 |
| IL | 28 | 15 |
| LA | 53 | 20 |
| MO | 35 | 16 |
| NY | 48 | 16 |
| OK | 38 | 15 |
| PA | 34 | 17 |

**Slide 38: BIG DATA Contributions. State Specific data from the BRFSS and ACS. Only study to examine health, chronic conditions, health-related quality of life, and disability measures among older people who are blind and have low vision at the state level. Only study to provide county level estimates of blindness and low vision for older people. Recent --2019—data from BRFSS & ACS. Only study where all this material resides in the same document.**

**Slide 39: BIG DATA Contributions. Demonstrates that many older people with blindness and low vision are often disadvantaged in multiple ways; Knowledge is lever for advocacy**

**Slide 40: Without data, you’re just another person with an opinion. --W. Edwards Deming**

**Slide 41: So What? Chance favors the well-prepared mind. ― Louis Pasteur**

**Slide 42: Foundation. Big Data Project serves as a foundation. Informs strategic planning. Drives policy development. Engages stake holders—aging, public health. Other materials will fill gap between state data and human experience.**

**Slide 43: Action Steps. Compile stories of effectiveness of vision rehab. Develop strategic plan showing what can be done. Share with state Management and Budget. Share with Aging. Share with Public Health—using their data. Use Briefing for media. Use portions of Briefing for grant applications**

**Slide 44: Fill in the Gap. Numbers have an important story to tell. They rely on you to give them a clear and convincing voice. --Stephen Few**

**Slide 45 & 46 Thank you very much.**

**Slide 47. Contact Information: John E. Crews, DPA, johncrews@bellsouth.net.**

|  |  |  |
| --- | --- | --- |
|  | VI | No VI |
| US | 37 | 17 |
| CA | 41 | 20 |
| FL | 35 | 19 |
| IL | 28 | 15 |
| LA | 53 | 20 |
| MO | 35 | 16 |
| NY | 48 | 16 |
| OK | 38 | 15 |
| PA | 34 | 17 |