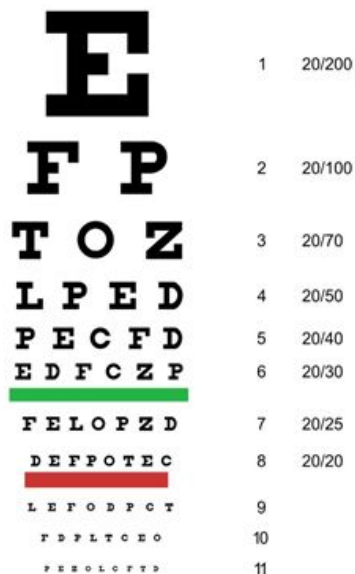

See It My Way: Worcester's Visually Impaired Population

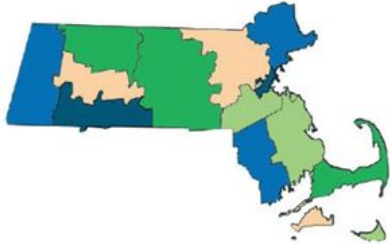
Nick Belizaire, Evan Bilsbury, Sean Doherty, Alex Morrison,
Alexa Nguyen, Sara Wang

What is meant by visual impairment?



- A person is considered legally blind if their best corrected visual acuity (BCVA) is 20/200 or worse (CDC)
- A person is considered to have low vision if their BCVA is 20/40 or worse (CDC)
- Contrary to common belief, the majority of VIPs are not completely blind and retain some degree of light perception.

Prevalence

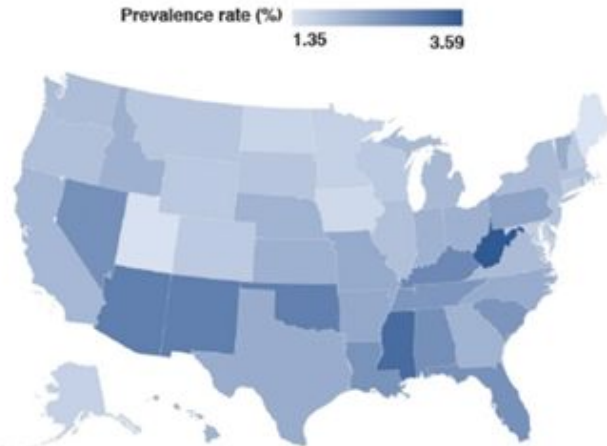


Prevalence of vision impairment in Massachusetts (CDC) 2019

Local and National Data

- Nationally 4.2 million people 40yrs+ are legally blind or have low vision

Prevalence of visual acuity loss and blindness varies widely by states.

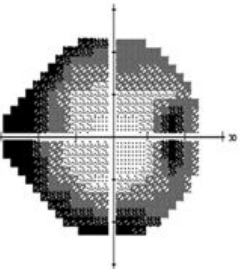
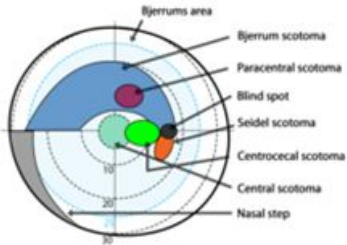
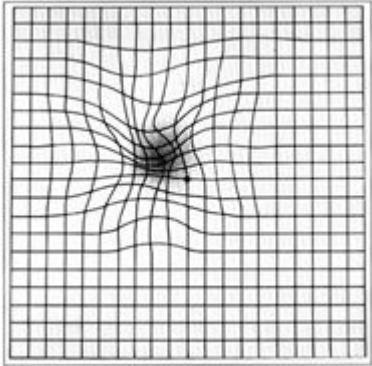


<https://preventblindness.org/prevalence-visual-acuity-loss-blindness-us/>

Data from American Community Survey - people who report severe vision impairment even when wearing glasses or contacts (including people who are blind).

Common Causes of Vision Loss

- **Age-related Macular Degeneration (AMD)** (*leading cause of blindness in 65+ adults*)
 - Degenerative damage to macula causing decrease in visual acuity of central vision
- **Cataracts** (*leading cause of blindness worldwide & vision loss in US*)
 - Clouding of lens
- **Diabetic Retinopathy (DR)** (*leading cause of blindness in American adults*)
 - Progressive damage to blood vessels supplying retina
- **Glaucoma**
 - Increase in intraocular pressure resulting in damage to optic nerve
- **Retinitis Pigmentosa (RP)**
 - Complex genetic disorder that causes progressive breakdown of photoreceptors (rods > cones) leading to tunnel vision/ loss of peripheral VFs
- **Stargardt's Disease**
 - Complex genetic disorder commonly due to ABCA4 mutation that causes progressive loss of central vision
- **Trauma/accident**
 -



Interprofessional Teams

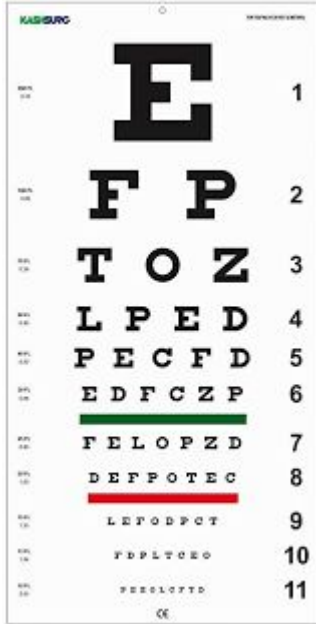
- Vitally important for improving quality of life for visually impaired persons.
- These teams work in parallel to
 - Identify and treat eye diseases
 - Aid in vision rehabilitation
 - Improving orientation and mobility skills
 - Improve VIPs mental health
 - And more!



Primary Care Physicians

- Important for identifying visual impairment through routine screening.
- Able to inform patients about ocular disease
- Coordinates referrals to other specialists





Eye Care

- **Ophthalmologist: MD/DO**
 - Examines, diagnoses, and treats ocular disease
 - Able to perform medical and surgical interventions
 - **Optometrist: OD**
 - Performs routine eye examinations
 - Prescribes corrective lenses
 - Manages ocular disease
 - **Optician: ABO-NCLE certification**
 - Designs, fits, and dispenses corrective lenses
 - **Ocularist: NEBO certification**
 - Designs and fits ocular prosthetics
-

Physical Rehabilitation



- **Orientation and Mobility Specialist:**
 - Work with VIPs to navigate their environment safely and independently
 - Teach VIPs how to use resources like white canes and guide dogs
- **Occupational Therapist**
 - Work with VIPs to adapt to visual impairment and learn to modify activities of daily living so that they can be done safely and effectively

Counseling Services and Social work

- Work with VIPs to address mental health issues that can accompany visual impairment
- Clinical Psychologist: Provides counseling and psychotherapy to improve well-being
- Psychiatrist: Provides counseling as well as medications
- Social Worker: Serves as a counselor and helps to coordinate care for VIPs



Population Health Advocacy - Strategies

Education



- Educate the public about VIPs
 - Spectrum of vision loss
 - How VIPs navigate the world
 - Educate the public about when/how to assist VIPs
 - Educate healthcare workers about how to assist VIPs in clinical settings
-

Population Health Advocacy - Strategies



Hands-On Experiences

- Teaching community members how to be sighted guides
- “Day in the life”

Population Health Advocacy - Strategies



Working with communities

- “Nothing about us, without us”
 - Involve communities in conversations about what they want and what would most benefit them
 - Allow people to share their experiences
-

Advocacy at a Federal Level

- Civil Rights
- Access to services, information, technology, consumer home products, transportation, etc.
- Equal employment opportunities
- Services to children and elderly

Local Opportunities for Involvement

MASSACHUSETTS ASSOCIATION
for the
Blind and Visually Impaired



- **MAVBI has unique volunteer opportunities:**
 - Reading Mail, Magazines, Books and Paperwork
 - Writing letters, emails and filling out forms online
 - Helping with Grocery shopping or errands
 - Serving as a sighted guide for running, walking, gym and other fitness activities
- **Central Mass Specific**
 - There is a great need to medical escort drivers in central mass
 - Escort VIPs to doctor's appointments
 - Stipend provided for gas

Local Opportunities for Involvement



- **United in Stride**
 - Online tool for runners who are VIPs to connect with sighted guides
 - Can enter into database to network with VIPs looking for opportunities to run and walk



- **Team with a Vision**
 - Official Charity of Boston Marathon
 - Participants raise money for MABVI
 - Support Visually Impaired Advocacy groups around Mass



**OFFICIAL
CHARITY**

Local Opportunities for Involvement



- **Beep Ball**

- Adaptive version of baseball for the visually impaired
- The ball in play emits a sound so it can be localized by the players
- Use of sighted pitchers and catchers

<http://www.blindcitizens.org/reneades/>

White Cane Day

- Bring awareness to the Visually impaired population and to the white cane
- Worcester dignitaries experienced what it's like to be visually impaired with walk around the city
- UMass Medical students received sighted guide training



WalkFit

- Local walking group for visually impaired individuals in Worcester
- Sighted guide training for UMass Medical Population and Community Health Clerkship students
- Canines for Disabled Kids, Carroll Center for the Blind, BVT Leo Club



Audio Journal

- Audio Journal is a radio reading platform for those that are disabled for visually impaired who can not access print material
- Started within the Worcester Public Library, but now serves a large part of central Massachusetts
- Topics include local and world news, science, politics, and entertainment
- UMass Medical Population & Community Health Clerkship students submitted entries to weekly Science Journal



VIP Interviews

- Liz Myska, lawyer
- Chris Downey, architect and rower
- Drew Crooks, digital accessibility specialist
- Blair Wong, optician

Virtual Experiences

*On Zoom or the TalkFit Conference Line

Discussions

- Key concepts of visual impairment (Sam Lauffer, MS4)
- Treating the Whole Person (Dr. Mike Marciello)
- Blind Baseball/Adaptive Sports (Dr. Mike Marciello)
- Patient Cases (New England College of Optometry, Liz Myska)

Seminars

- Management of Thyroid Eye Disease
- Apprenticeship as a Pathway to Employment
- Learning from Patients to Provide Accessible Healthcare



Key Takeaways

- Meeting VIPs where they are at
 - Individual circumstances
 - Environment
 - Self-efficacy
- Recognizing overlapping identities
- Challenging our own assumptions
- “Nothing about us without us” (allied advocacy)

Acknowledgments

THANK
YOU!

Thank you to:

- Our fearless leaders Liz Myska, Dr. Mike Marciello, and Heather-Lyn Haley for everything!
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- Prior student leaders of Audio Journal and See It My Way, Sam Lauffer and Shannon West, for their hard work
- Walkfit VIPs, Peg, Sarah, Elana, Samer, and Connie, for great company and helping us become better sighted guides
- Expert guides Daryl, Colleen, Jack, and Anna for their advice and guidance
- Individuals from the wheelchair stroll for bringing a new perspective on mobility and accessibility
- Community volunteers Amy, Adi, Frank, John, John, and Jason

