



I See You! Practical Solutions to Address Low Vision in Older Adults

Presenters:

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Course Objectives

1

Identify the four common visual impairments and their effect on occupation in the geriatric population

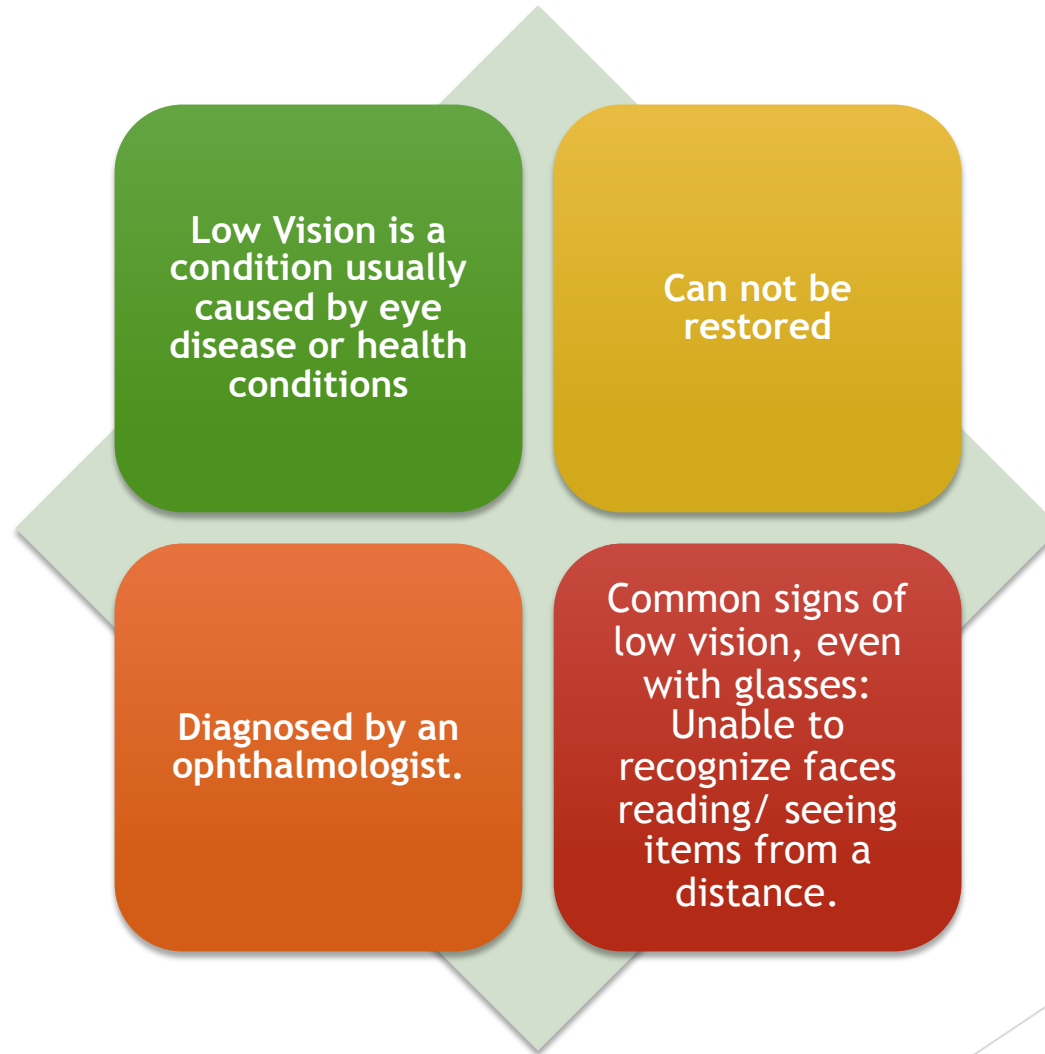
2

Identify standardized and non-standardized assessments used by occupational therapists

3

Identify cost effective solutions to increase independence among the geriatric population with visual impairments

What is Low Vision?



Background

- ▶ Low vision and blindness are leading causes of disability among U.S. residents. (Capili, Watson, & O'Conner, 2019)
- ▶ 8.2 million people were affected by uncorrected visual impairment in 2015 (Capili, Watson, & O'Conner, 2019).

Background

- ▶ Approximately 12 million people 40 years and over in the United States have vision impairment, including 1 million who are blind, 3 million who have vision impairment after correction, and 8 million who have vision impairment due to uncorrected refractive error (Centers for Disease Control and Prevention, 2020).
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- ▶ As of 2012, 4.2 million Americans aged 40 years and older suffer from uncorrectable vision impairment, out of which 1.02 million who are blind; this number is predicted to more than double by 2050 to 8.96 million due to the increasing epidemics of diabetes and other chronic diseases and our rapidly aging population (Centers for Disease Control and Prevention, 2020).

Background

In 2015, there were 2.91 million people over the age of 60 with VI (as defined as best-corrected visual acuity in better eye) with an expectation 3.35 million in 2020 and 6.57 million by 2050 (Varma, Vajaranant, & Burkemper, 2016).

- ▶ State of Florida
 - ▶ Highest per capita prevalence of visual impairment, Third highest per capita prevalence for blindness (Varma, Vajaranant, & Burkemper, 2016).
 - ▶ More than 480,000 people report blindness or severe difficulty with vision even with glasses (Centers for Disease Control and Prevention, 2019).

Components of Vision

Visual Acuity

- The level of detail a person can see objects (Warren & Barstow, 2011).

Visual Field

- The total area a person can see in a single view without turning the head or eyes.
- Includes central and peripheral field (Warren & Barstow, 2011).

Components of Vision

Contrast Sensitivity

- The ability to distinguish between similar shades of light and dark and similar colors (Warren & Barstow, 2011 & Beckley, 2016).

Light Modulation

- The ability to regulate light, control glare and adapt to changing light conditions (Warren & Barstow, 2011).

Components of Vision

Visual Perception & Interpretation

- The ability to process and interpret the information the brain receives from the eyes (Warren & Barstow, 2011).



Vision Loss Simulator

- ▶ Versanhealth.com/visionloss/
- ▶ Genworth.com/aging-and-you/health/vision-disorders.html
- ▶ NEI VR App- Great app, covers the major diagnoses that we covered here.
- ▶ <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/see-what-i-see-virtual-reality-eye-disease-experience>

Common Vision Impairments

► Cataracts

- An opacification or cloudiness of the lens of the eye. Can make vision blurry, hazy or less colorful
- Commonly occurs with the aging eye
- Affects distance vision before near vision
- Typically develops slow (Warren & Barstow, 2011).

► [Video](#)

Common Vision Impairments

Age Related Macular Degeneration

- ▶ A disease that causes progressive deterioration of the cells of the macula and fovea in the center of the retina (Warren & Barstow, 2011).
- ▶ Affects the central visual field only (Warren & Barstow, 2011).
- ▶ [Video](#)

Common Vision Impairments

Glaucoma

- ▶ A group of eye diseases in which increased pressure inside the eye causes damage to the optic nerve
- ▶ Affects peripheral vision
- ▶ [Video](#)

Common Vision Impairments

- ▶ **Diabetic Retinopathy (DR)**
 - ▶ Affects the entire retina and can cause any level of vision loss including total blindness (Warren & Barstow, 2011).
 - ▶ The longer a person has diabetes the greater the risk of vision loss from DR (Warren & Barstow, 2011).
 - ▶ [Video](#)

OT Practice Guidelines

- ▶ Referral

- ▶ It is best practice that the patient is evaluated by an ophthalmologist, optometrist or both to address ocular health prior to the OT evaluation (Kaldenberg & Smallfield, 2013) .

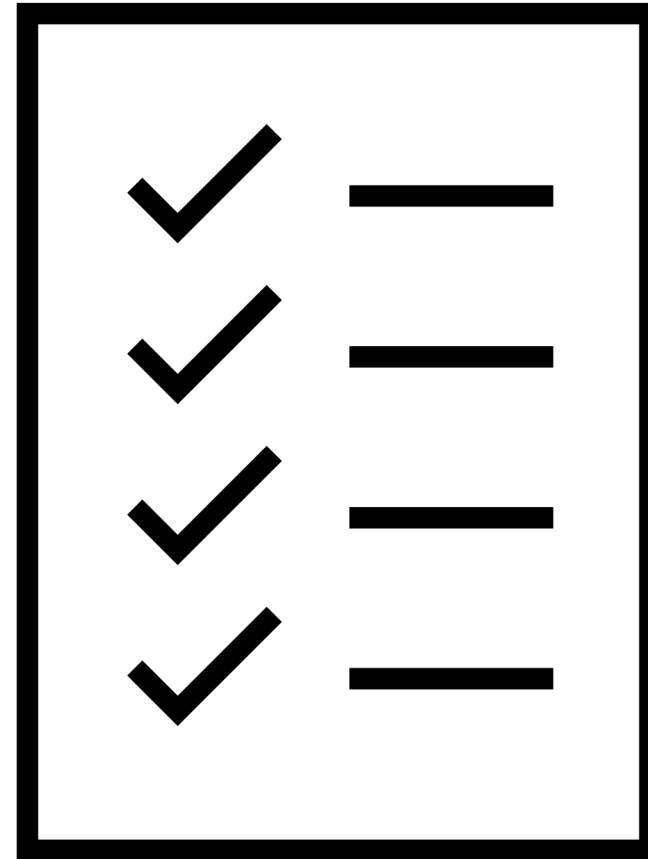
OT Practice Guidelines

► Screening

- OTs screen areas of visual function that have been found to increase a person's risk of functional impairment (Kaldenberg & Smallfield, 2013).
- Visual Function Areas: distance and near vision acuity, contrast sensitivity, and central and peripheral visual fields (Kaldenberg & Smallfield, 2013).

Functional Vision Screening Questionnaire

- ▶ 15 Item self report tool
- ▶ Yes/No Questions
- ▶ Individuals scoring 9 or more should seek professional assistance (Warren & Barstow, 2011).



OT Practice Guidelines

- ▶ Evaluation
 - ▶ Develop an occupational profile and complete analysis of occupational performance (Kaldenberg & Smallfield, 2013).

Occupational Therapy Assessments

Areas of Occupation

Canadian
Occupational
Performance
Measure

Activity Card Sort

Revised-Self-Report
Assessment of
Functional Visual
Performance

Driver Performance
Testing

Role Checklist

Leisure Interest
Checklist

(Kaldenberg & Smallfield, 2013)

Occupational Therapy Assessments

Performance Skills

MNRead Acuity Charts-\$70.00

Pepper Visual Skills for Reading Test-\$275.00

Morgan Low Vision Reading Comprehension Assessment-\$95.00

Low Vision Writing Assessment (VA)- Free

Brain Injury Visual Assessment Battery for Adults (biVABA)-Retail \$700.00, \$495.00

Berg Balance Scale

Timed Up and Go

Geriatric Depression Scale

Mini-Mental State Examination

Standardized Sensory Testing

(Kaldenberg & Smallfield, 2013)

Occupational Therapy Assessments Contexts & Environments



Canadian Occupational Performance Measure-
Digital - \$55.00



Home Environment Lighting Assessment- Free



Structured Home Safety Assessment- Free

(Kaldenberg & Smallfield, 2013)

Occupational Therapy Assessments Visual Acuity (VA)

► Snellen Chart

- Generally written in fractions
- Top number represents the test distance
- Bottom number represents the letter size

$$VA = \frac{\text{Test Distance}}{\text{Letter Size}}$$

(Rathore, Oyede, Narendran, & Yang, 2012).

Legal Blindness Defined

►Of the better eye corrective visual acuity of 20/200 or worst. Or of the better eye 20 degrees of visual field or less

(Rathore, Oyede, Narendran, & Yang, 2012).

E	1	20/200
F P	2	20/100
T O Z	3	20/70
L P E D	4	20/50
P E C F D	5	20/40
E D F C Z P	6	20/30
F E L O P Z D	7	20/25
D E F P O T E C	8	20/20
L E F O D P C T	9	
F D P L T C E O	10	
P E Z O L C F T D	11	

Occupational Therapy Assessments Contrast Sensitivity

- ▶ **Non-Standardized**
 - ▶ Example: Identifying similar medications on a contrast background
- ▶ **LEA Numbers (Standardized)**
 - ▶ Portable & Easily Administered
 - ▶ 6 pages in flip-booklet Form
 - ▶ Grouped numbers or symbols that decrease in contrast on each page (Beckley, 2016).

Occupational Therapy Assessments Visual Field Loss

- ▶ **Gross Field Assessment Test (Non-standardized)**
 - ▶ Test for peripheral vision field loss
 - ▶ Notes locations where clients cannot see targets to identify field loss
 - ▶ Glaucoma, Diabetic Retinopathy, and other Neurological Conditions (Warren & Barstow, 2011).
 - ▶ [Video](#)

Ophthalmologist Assessments

Standardized Visual Field Test

30-2

- Used with neurological conditions (CVAs)

24-2

- Early Stage Glaucoma

10-2

- Fine tuning the degree of deficit

Occupational Therapy Assessments Central Visual Field

- ▶ Clock Face (Non-Standardized)
- ▶ Amsler Grid (Standardized)
- ▶ Both test identify the area of a central scotoma (American Academy of Ophthalmology, 2019).

Occupational Therapy Assessments Reading Performance

- ▶ **Minnesota Low Vision Reading Acuity Charts (Standardized)**
 - ▶ Provides information on reading acuity, critical point size, and maximum reading speed in one assessment (Kaldenberg & Smallfield, 2013 & Calabrese et al, 2018)
 - ▶ Assists in determining magnification for reading and near work tasks
 - ▶ Free trial for Ipad

Websites for resources and purchase of low vision items

- ▶ Maxiaids.com
- ▶ lssproducts.com (learning sight and sound)
- ▶ Walmart.com
- ▶ Amazon.com
- ▶ Amazon Discounted Services
 - ▶ \$5.99/month for Amazon Prime
 - ▶ Eligibility Requirements: Medicaid or EBT card
- ▶ Aao.org- American Academy of Ophthalmology- plethora of resources and links: audio books and magazines; large print materials; technologies (computer, cell phone and video magnifiers); national organizations for support; information and research updates; self help materials

Practical Solutions

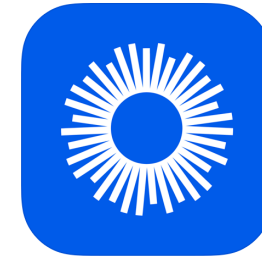


Practical Solutions Apps & Services

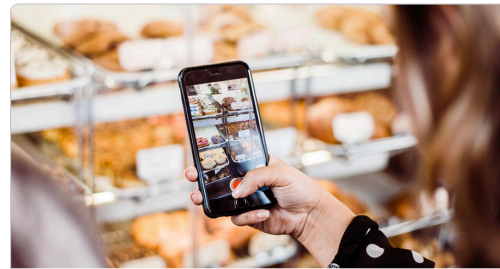
A. Be My Eyes

B. TapTapSee

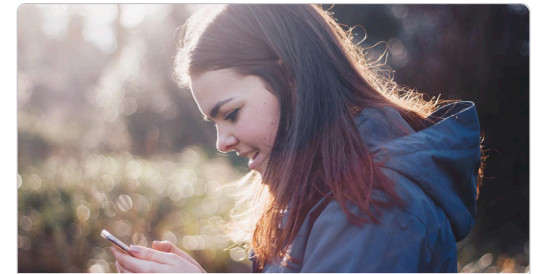
A.



Be My Eyes 17+
See the world together
[Be My Eyes](#)
★★★★★ 4.7 • 5.2K Ratings
Free



Blind or low-vision person requests assistance



Sighted volunteer receives video call

B.



TapTapSee 4+
Camera for the Blind
[Cloudsight, Inc.](#)
★★★★★ 4.2 • 1.2K Ratings
Free
[View in Mac App Store](#)

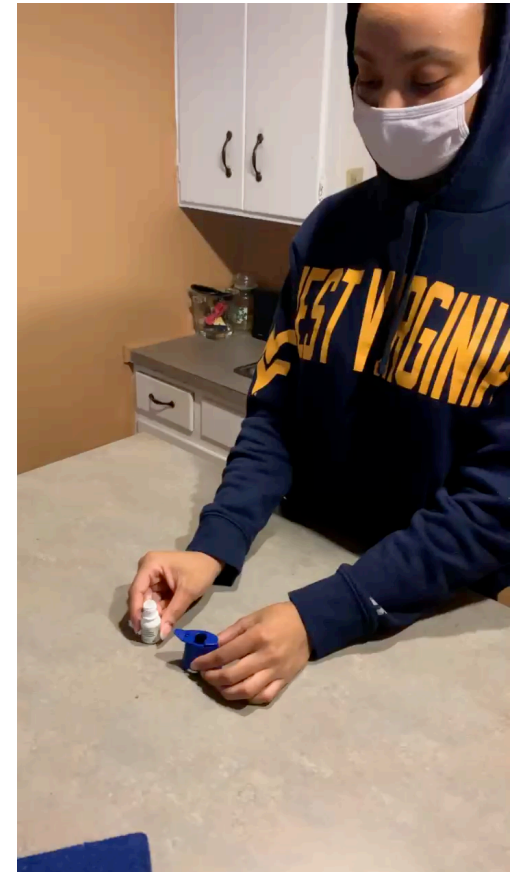
Practical Solutions Medication Management

A. Free service, Limited providers

B. Autodrop Eyedrop Guide \$5.00



B. [Video](#)



Practical Solutions Smart Homes

- ▶ Echo Dot Smart Speaker with Alexa
- ▶ Voice Activated
- ▶ Control Smart Home (lighting, thermostat, appliances, doors & locks)
- ▶ Connect to other devices
- ▶ Amazon
- ▶ \$49.99



Practical Solutions Home Management

- A. Boil Alert
- B. DigiGuard

A. [Video](#)



B. [Video](#)



Practical Solutions Magnifiers



The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

Sylvia Young

Occupational Therapist and Caregiver

TOOLS

- ▶ Bump Dots - these are clear or colored plastic dots that come in different sizes and can be placed on just about anything from stoves and washers to computers and remotes.
- ▶ Easy Say Stop Audible Liquid Level Indicator - place on the lip of a cup to determine liquid level to prevent spillage.
- ▶ iBill Talking Money Identifier - provides voice identification for bill denomination. Helpful for shopping.
- ▶ Advanced Talking Blood Pressure Monitor - easy to use and verbalizes results.



TOOLS

- ▶ Victor Reader Stream - My husband uses this more than any other tool daily. It is a recorder and player. You can record messages to self or addresses or phone numbers you need to recall. They are wirelessly connected to the internet and you can download books or magazines to listen at your leisure.
- ▶ 4-Alarm Talking Watch - which by pushing a button will give you time and date.
- ▶ Ambutech Rigid Graphite Cane - allows you to travel safely with or without a sighted person.
- ▶ PenFriend 3 Voice Labeling System - a type of recorder that will allow you to mark your medications or other items like can goods to ID them later when you need them.



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Acknowledgements



Sylvia Young, OTR/L



Dr. Karen Young
Capital Eye Consultants

More Information

- ▶ Complete brief survey in order to receive participation credit, link to survey in chatbox.
- ▶ Presentation and video will be accessible on the website, kavanaconsultants.com, under "Professional Resources"
- ▶ Certificate of Completion will be emailed to all confirmed participants. If you do not receive a certificate 3-5 business days, please email info@kavanaconsultants.com
- ▶ Participation will be directly reported to CE Broker.

Upcoming Event



DIABETES AND LOW VISION: How Do I Manage?

As part of Diabetic Eye Disease Month, join Kavana Consultants and guest speakers for a live discussion on Low Vision and Diabetes.


 **FACEBOOK**
LIVE EVENT

THURSDAY
November 19, 2020
At 6:30p.m. EST



CHERYL HAYNES
Occupational Therapist



LEAH BAYNARD
Occupational Therapist

GUEST SPEAKERS






Dr. Otis Kirksey
Pharmacist



Dr. Aaron P. Appiah
Ophthalmologist

FOR EVENT QUESTIONS OR INFORMATION:

KAVANA CONSULTANTS

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 850.757.0125



Diabetes and Low Vision
Thursday, November 19, 2020
6:30PM via Zoom
Live Stream via Kavana
Consultants Facebook

No Registration Required
Link Available on November 1st,
kavanaconsultants.com

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