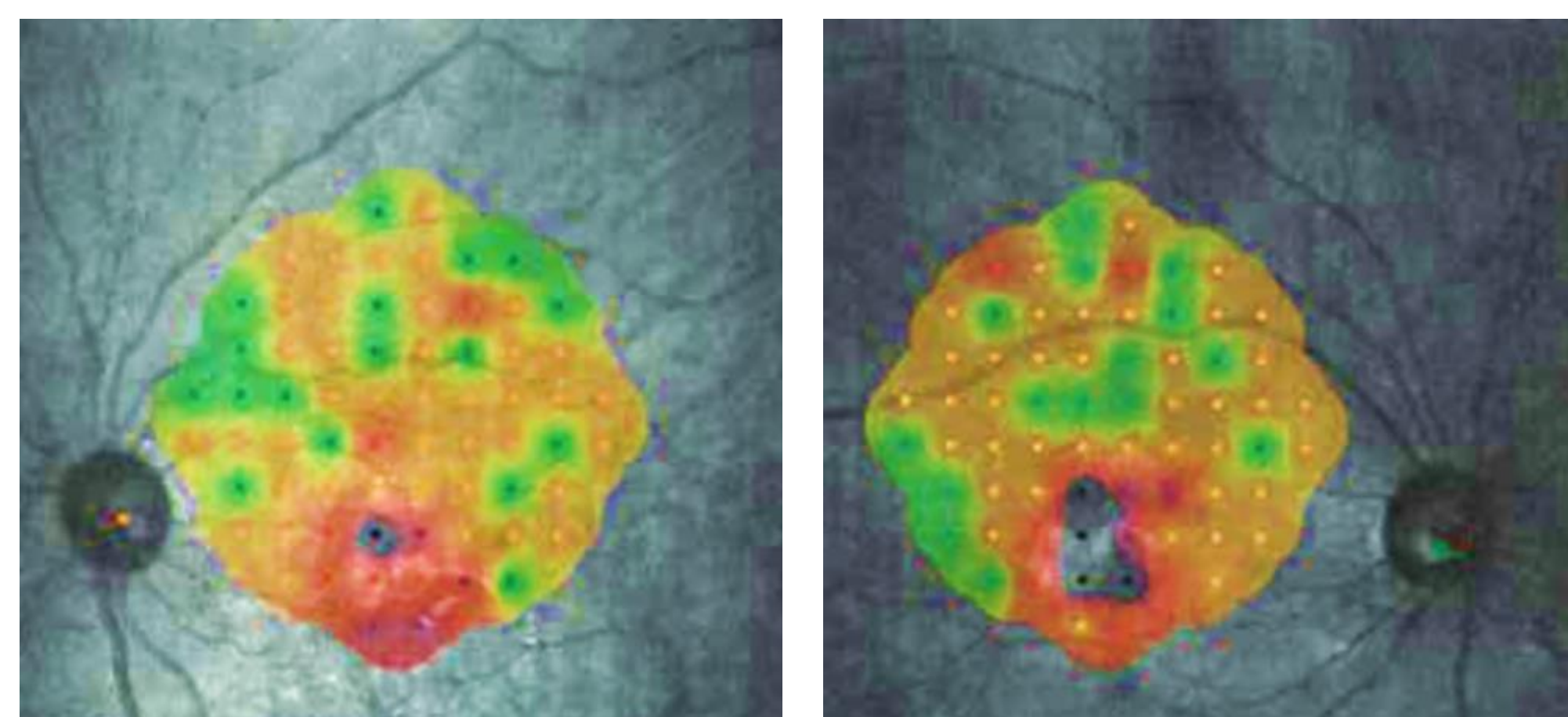


# Effectiveness of Low Vision Intervention and Bioptic Training for a Patient with Age-Related Macular Degeneration

Brianna Starr – Creighton University  
Mentor: Stacy Thoene, OTD, OTR/L

## BACKGROUND

- 76 y/o male, married
- Retired, veteran – VIST program
- Primary Vision diagnosis
  - Low Vision – “irreversible and medically uncorrectable visual impairments of carrying degrees that...interfere with daily function” (Smallfield, Clem & Myers, 2013)
  - Common symptoms: abnormal visual field, reduced acuity, reduced contrast sensitivity (Moderate)
  - AMD (Wet); common in geriatric population
    - Impaired central vision; peripheral spared
    - Scotoma (blind spot) involving central area of both eyes
- Acuity: OS 20/80, OD 20/200



Left Eye

Right Eye

## CLIENT HISTORY

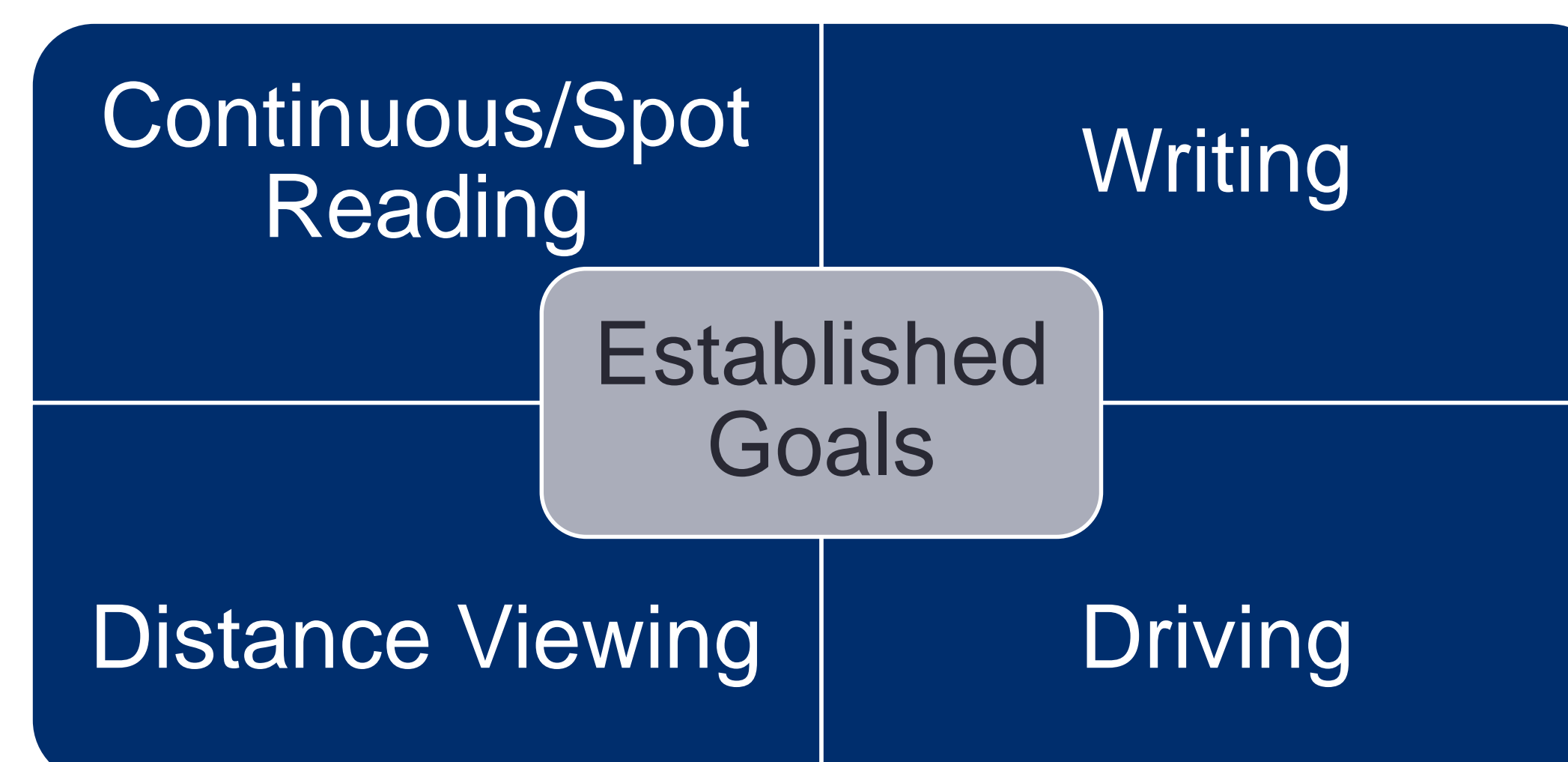
- No history of medical problems and/or diagnoses relevant to vision loss or vision rehabilitation
- No previous referrals or sessions with occupational therapy

## RESEARCH QUESTION

What is the effectiveness of compensatory intervention strategies and Bioptic training on improving independence in IADL participation in a patient with Age-Related Macular Degeneration?

## METHODS

- Initial appointment with ophthalmologist; referred to occupational therapy for training and education on prescribed devices
- Occupational Therapy evaluation
  - MN Read (1.3 M with +4.00 readers and task lighting; 0.5M with +4.00 readers and 16D HH LED magnifier)
  - Clock Test – PRL (superior, leftward)



- Total number of visits (5)
- Training provided (AD) during OT sessions

Non-Optical Devices	Optical Devices	Electronic Devices
<ul style="list-style-type: none"> <li>• Task Lighting</li> <li>• Large print pill sorter</li> <li>• Bold line paper</li> <li>• Bold pens</li> <li>• Large print cards</li> </ul>	<ul style="list-style-type: none"> <li>• 12D and 16D HH LED magnifier</li> <li>• 12D Stand LED magnifier</li> <li>• 3x Easy-pocket LED magnifier</li> <li>• MaxTV glasses</li> <li>• Telescopic spectacles</li> </ul>	<ul style="list-style-type: none"> <li>• Pebble HH CCTV</li> <li>• Merlin Desktop CCTV</li> </ul>

- Home visit to train with electronic devices (CCTV, magnifiers) and implement modifications to promote independent use (i.e. bump-dots on appliances)
- Bioptic training
  - Obtained ophthalmologist approval
  - Initial trial: 4x bioptic over OD eye; supervision required during training in static and dynamic environment
  - Additional sessions to resume after COVID-19
- Education on referrals
  - Additional training for independent driving with a Certified Driving Rehabilitation Specialist

## BIOPTIC QUALIFICATION & TRAINING

- 20/60 visual acuity or better using bioptic is required in Nebraska
  - Restrictions depend on visual ability of the driver
- OT typically completes session in clinic, on the road and in community settings
  - Dynamic and static viewing
- Additional training not required in Nebraska
  - Certified Driver Rehabilitation Specialist



## RESULTS

- Devices received through VIST program (12D HH LED magnifier, 3x Easy-Pocket LED magnifier, yellow filters, Merlin CCTV, 4x bioptic)
- Receptive to training and education on devices
- Demonstrated independent device use
  - Met short- and long-term goals with exception of bioptic goal
- Patient not discharged due to VA authorization
  - Sessions on hold due to COVID-19
  - Scheduled to continue bioptic training
    - Additional training: passenger training in residential areas and community mobility (i.e. grocery store)
- Referral(s)
  - Certified Driving Rehabilitation Specialist for additional training
  - Patient demonstrated good response to education on CRDS and benefits of additional training

## BOTTOM LINE FOR OT

- Vision is a key sensory system we often rely on to obtain information about our surroundings
- AMD is a progressive condition that may negatively impact ADL and IADL participation
- Onset of AMD often leads to changes in driving habits such as, avoidance and reduced time behind the wheel
- Individuals may experience depression, social isolation, loss of independence and overall decreased quality of life
- A personalized, multidisciplinary approach is essential for individuals to promote personal goal attainment, improved ADL and IADL participation and overall quality of life
- Occupational therapists play a valuable role in low vision rehabilitation due to the holistic nature of our profession and our ability to facilitate individualized treatment plans to meet patient goals

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