Excellence in Vision Rehabilitation
...caring for those who served

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Loss of sight is second to loss of life
Overview

- Background of Low Vision
- Levels of visual impairments
- What is “low vision?”
- Vision rehab services in VA/BRC
- The multidisciplinary team
- The low vision evaluation
- Rehabilitation training, inpatient programs
- Questions
...that cannot be corrected medically, surgically, or by refractive means is considered low vision.
“Low Vision” terminology...

- Low vision: significant reduction of visual function
- Cannot be fully corrected by ordinary glasses, contact lenses, medical treatment, and/or surgery

- “Visual Disability”
- “Visual Function”
- Functional Vision Loss
- Not necessarily “Legally Blind”
Legal Blindness Definition

- BCVA of 20/200 or worse in the better seeing eye (Snellen VA chart),

- BCVA worse than Visual Field is 20 degrees or less in better seeing eye

- Visual Efficiency (VA+VF), based on percentage non-progressive (20%) vs. progressive (64%) conditions
Eye Diseases causing vision loss

**Most common causes:**
- Age-related macular degeneration (AMD)
- Diabetic retinopathy
- Glaucoma
- Cataracts
- Retinitis pigmentosa

**Other common causes:**
- Corneal Dystrophy
- Retinal Detachment
- Acquired /Traumatic Brain injury
- Neurological
- Congenital

Photographs courtesy of National Eye Institute
Quality of Life Impacts

- Low vision often results in impairment of daily activities, loss of independence, increased risk of fractures, increased health care expenses, and reduced physical functioning, quality of life, and ultimately life expectancy.

- Vision rehabilitation can enable more independent functioning.
Low Vision: Prevalence

- About 1.3 million people in the U.S. are legally blind
- Each year 75,000 more people in the U.S. will become blind or visually impaired
- Baby boomers will double the current number of blind or visually impaired in the U.S. over next 30 years
- Federal and state annual rehabilitation expenditures exceed $250 million

Photograph courtesy of Department of Veterans Affairs
Visual Challenges

- Visual acuity
- Contrast sensitivity, glare
- Visual field, blind spots
- Color discrimination
- Depth perception
- Hand-eye coordination
- Light/photo Sensitivity
Low Vision and Blindness Continuum of Care

- 2008: VA expanded and implemented 3 levels of care: intermediate, advanced and outpatient rehabilitation clinics (aka VISOR)

- Range Basic LV services (mandated at every VA) to 6 week inpatient blind rehab training at the BRC’s
VA Low Vision Services

- Basic Low Vision Clinic
- Intermediate (OD, LVT)
- Advanced (OD, LVT, O&M)
- Outpatient Blind Rehab Clinics—“VISOR”
  (Hoptel, 2 wks prog, OD, LVT, O&M, Computer training, vision rehab therapist)
- Inpatient Blind Rehabilitation Centers (BRC)
  6-8 week program, most depth/full svc
Low Vision (Outpatient) Rehabilitation Team

- Low Vision Optometrist/Ophthalmm
- BROS
- VIST Coordinator
- Mobility instructor
- Low vision therapist
- Community Agencies
Low Vision Evaluation

- Detailed case history
- Functional assessment
- Goal determination
- Visual acuities
- Visual field assessment
- Contrast sensitivity/color vision assessment
- Trial frame refraction
- Low vision aid/device evaluation
- Ocular health exam
- Patient education
- Plans and referrals
Detailed History / Intake

- Disease,
- Awareness of eye condition(s)
- Onset, Chronology of loss, stage of loss
- Eye/hand dominance
- Hearing loss
- Color Vision, contrast
- Occupation/Hobbies
- Living arrangement
- Support network
- Mobility
- Stopped driving: ? yrs
Activities of Daily Living (ADL’s)

- Grocery shopping
- Cooking
- Cleaning
- Laundry
- Grooming
- Finances
- Lawn Care/Gardening
- Walking/driving
Ocular Function Assessment

- Lighting (Indoor/Outdoor)
- Contrast (Cloudy/Sunny days)
- Crossing streets
- Public transportation (bus signs, crosswalks)
- Previous aids or devices,
- Hx of glasses, amblyopia/strab ("lazy eye")
- Goals (attainable)
Low Vision Charts

Feinbloom

EDTRS
Color Vision Test

D15-Farthsworth Test

Types of color vision defects

Figure 25. The Farnsworth Panel D-15 results from patients with various colour vision defects. The rod monochromatic results are idealised to illustrate the scotopic axis along 5-14. As a rule, rod monochromats give variable results with a tendency of crossing errors to fall along the 5-14 axis.
MARS Contrast Sensitivity
Patient Goals

**Near Goals/Tasks**
- *Spotting vs. Continuous*
- Reading
- Read/send mail
- Electronic devices
- Finances/bills/write checks
- *Intermediate tasks:*
  - Play cards, gardening, coin/stamp collecting
  - iPad/Computer

**Distance Goals/Tasks**
- Watching TV (size/dist)
- Watch live sports event
- Play sports (golf, shuffle board, ? Ball)
- Fishing
- Seeing “faces” at socials
- Driving ???!
Spot reading:
Hand-Held Magnifiers
Stand Magnifier
Sustained Reading: Microscope

ClearImage II® Microscope mounted in May Fulvue frame
Floor Lamps, Directed
Table Task Lamps
CCTV Electronic Magnifier “Reader”
More CCTV Devices...
Portable Digital Magnifiers

Read menus, labels, prices, and more!
OCR Readers...verbal read-back
Spotting: Monocular Telescope
Distance Device: Telescopes
# DVI Bioptic Telescopes

## Powers Available

- **Model I:** 1.7X, 2.2X, 3.0X, 4.0X
- **Model II:** 2.2X
- **Wide Angle:** 1.4X, 1.7X, 2.2X, 3.0X

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**Binocular 2.2X Bioptic Telescopes Model II**

with black housings, mounted in the Yeoman 6 frame

**Binocular 3.0X Bioptic Telescopes Model I**

with black housings, mounted in the Yeoman 6 frame

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The Bioptic Telescope is mounted high in the carrier lens, angled up, and the optical center of the ocular lens is positioned 10 mm below the top of the carrier lens.
Opti-Visor/Loupes
Fit-over Filters Types
History of Blind Rehab Centers

- British, St Dunstan- 1915 (WWI)
- Model of Care-U.S. comparative to U.K.
- 1st Center 1945 (Hines, Chicago), solo BRC for 17yrs, until post Vietnam War more added regionally strategic
- 13 Centers in U.S. now
- Newest BRC in Long Beach, CA with 24 beds
Maj. Charles Robert Soltes, Jr, O.D. Dept of VA
Blind Rehabilitation Center in Long Beach

- 24 residential inpatient bed facility
- 24hrs/day nursing care
- Personal suite per patient, private bath
- Recreational/Fitness Center
- Lounge (meals, social, TV)
- Classrooms/Instruction
Blind Rehabilitation Centers
Multidisciplinary Team

- Low Vision OD
- Low Vision Therapists (Visual Skills)
- Daily Living Skills
- Manual Skills
- Computer Access Training
- Orientation/Mobility
- Recreational Therapist
Clinical/Medical Team

- Optometry and Vision Rehab Team
- Psychology
- Social Work
- Dietitian/Nutrition Counseling
- Nurse Practitioner/Medical Staff
- Nursing Staff (RN, LVN)
- Audiology *referred as needed
Nursing Station
Veteran’s Day at Long Beach BRC

- 0700 Breakfast
- 0800-1130 Classes/Instruction*
- 1130-1200 Break
- 1200-1300 Lunch
- 1300-1500 Classes/Instruction*

*Medical appointments can be anytime during the day, as needed
Mobility Training
Computer Access Training
Visual Skills Training
Manual Skills Department
Woodshop
Home Mechanics
Special Projects
“Happiness cannot come from without. It must come from within. It is not what we see and touch or that which others do for us that makes us happy; it is that which we think and feel and do, first for the other fellow and then for ourselves.”

-Helen Keller
“Never tell a patient there is nothing more to be done. Rehabilitation is always an option.”

-Hellen Keller
“Strengthened by their courage, heartened by their valor, and borne by their memory, let us continue to stand for the ideals for which they lived and died.”

-Ronald Reagan
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