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3rd Edition

Low Vision Aids Practice

Ajay Kumar Bhootra

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2 CHAPTER

Low Vision Examination

Chapter Outline

- **Visual Behaviour**

Low vision patients are different from the normal population. The low vision patients are aware of their eye condition. They also know that they have lost the vision which cannot be regained by any means. But when they come to a low vision practice as because someone has referred them, they are skeptical and at the same time expect lot of miracles. It is, therefore, very critical to talk to the patients at the onset and to establish the realistic goals for the low vision examination.

Unlike normal eye examination, low vision examination is not driven to achieve 6/6 acuity on Snellen test chart. The visual goals of low vision examinations are to explore patient's goals and concerns and to address them to the extent possible. Different patients may have different goals and concerns. The practitioner who neglects patient's concerns and goals cannot provide satisfactory low vision rehabilitation. Successful rehabilitation occurs only when the practitioner understands patient's goals and concerns and formulates his goals accordingly. However, the goals must be realistic and the patient must be asked to prioritize his visual goals if he is too demanding. The emphasis is on functional vision examination. Functional vision is the use of vision for specific tasks. It is not related to the measure of distance visual acuity or near vision acuity. A patient may have very poor vision for detailed work such as weaving, carving, or reading but may be able to see and avoid objects so that he can move around safely. Many low vision patients can learn to make better use

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of their residual vision and can function efficiently with only small amounts of visual information. Functional vision may be improved with refractive correction, low vision devices, or instruction in the use of vision.

VISUAL BEHAVIOUR

The holistic and careful low vision examination ideally begins much before the patient enters the examination room. Observations of visual behaviors of the patient in an unfamiliar environment can provide lot of clues regarding the visual status of the patient's eye. Observations are very important in low vision examination. The practitioner must make a note of his observations before kicking off the actual examination procedures. Using these observations, it is possible to design relevant questioning pattern for history taking and then design and implement the examination and rehabilitation strategies for the patient. This is based upon the hypothesis that the patient has developed these visual behaviors over the period of time because of the effect of his ocular condition. It is important to understand what the patient can do for himself, when he needs some help, or how is his visual behavior different from normal population. **Table 2.1** shows the important visual behaviors that may be observed in different low vision patients.

These observations are very helpful to know a lot about the patient. Before you embark on the comprehensive scope of low vision examination, it is important to strategize the way forward. This is important broadly because of two reasons:

1. Comprehensive low vision examination is a time-taking procedure where patient and practitioner's relationship is built up gradually during the examination process. A typical low vision examination may be conducted over a period of time that may range from one to several sessions in 1 day or more. The examination may be conducted in clinic and also in patient's environment. It may also be done indoors and outdoors to assess the patient's difficulties in multiple environments.
2. It is important to understand patient's motivational level at the onset. When low vision patients arrive for a low vision assessment,

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Table 2.1: Visual behaviors of low vision patients.

Visual behavior	*Relevance*
Downward head tilt	Indicates photophobia and adaptation to prevent the effect of glare
Head turns or tilts to one side	Indicates peripheral field defects, the turn is in the direction of field loss
Frequent head and eye movement	Indicates presence of significant field constriction
Unusual head posture	May indicate the presence of central scotoma
Postural stiffness and maintenance of close proximity to walls or handrails	Peripheral visual field loss
Squinting of eyes	Photophobia and presence of refractive error
Erratic eye movement	Lack of central fixation or central scotoma
Eye poking	Discomfort in an irritated eye
Soiled clothing or missing buttons	Possibility of difficulties in the area of activities of daily living
Disheveled, fatigued appearance	Serious systemic disorder

they often talk about the experiences of their previous eye examination. Often they put up their apprehensions and resist accepting the fact that there is a possibility of using residual vision for functional visual independence. "My doctor just dilated me and took lots of pictures and he said that nothing can be done to improve the vision further." These are the common comments that are most commonly heard in the low vision practice. If these apprehensions are deeply rooted, they create a big obstacle in the low vision rehabilitation. The practitioner must spend some time with the patient, make complete effort to remove such perception, and take the process step by step.

Once the patient enters the examination room, low vision care can be offered in multiple models. It is important to design your own

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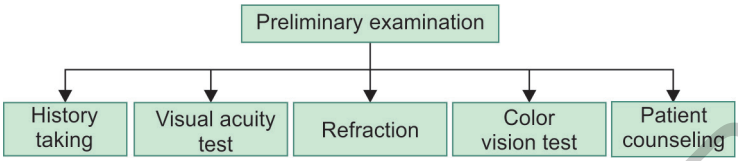
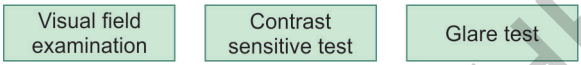
Flowchart 2.1: Preliminary tests for initiating the low vision examination.



Flowchart 2.2: Specialized procedures for low vision examination.



practice model, including the tests that you would be conducting for your patient, sequences in which you will apply them, your exit protocol and service re-entry. There are diverse ways in which effective services can be provided. The author designed his practice model to suit his private practice and also to make it rewarding professionally. It was designed in the following manner:

- Preliminary examination
- Specialized examination

Preliminary examination procedures were basically to set the goals, direction together with and patient counseling that would allow the author to achieve the desired results. He normally would apply three tests that could allow him to get into visual status of the patient's eyes and followed by patient counseling before getting into the extensive stage of specialized care. The flow of procedures usually includes the following tests as shown in **Flowchart 2.1**.

Specialized examination for evaluating the low vision patients varied depending upon patient's chief concern and his visual conditions. They were all subject to goals and objectives as set at the initiating stage. However, the three procedures as shown in **Flowchart 2.2** were most commonly applied for almost all patients.

SELECT THE CORRECT ANSWER

1. **What is the primary goal and objective of low vision examination?**
   a. To achieve the 6/6 visual acuity on Snellen test chart.
   b. To bring the focus of the object on to the retina.

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c. To address the patient's concerns and expectations to the extent possible.
d. To achieve the practitioner's own objective of clinical practice.

2. During the patient's visit to the practice, a low vision practitioner observes that the patient invariably keeps his head tilted downward. What does it indicate?

a. It indicates loss of peripheral vision.
b. It indicates photophobia.
c. It indicates presence of refractive error.
d. It indicates that the patient has discomfort because of irritated eyes.

3. During the patient's visit to the practice, a low vision practitioner observes that the patient invariably maintains close proximity to side walls while approaching the examination room. What does it indicate?

a. It indicates peripheral visual field loss.
b. It indicates photophobia.
c. It indicates reduced visual acuity.
d. It does not indicate anything.

Answers		
1. c	2. b	3. a

SELF-PRACTICING QUESTIONS

1. **What do you understand by functional vision? How can the functional vision assessment help a low vision patient?**
2. **Define visual behavior. How can a low vision practitioner derive benefits during a low vision clinical assessment by precise observation of visual behavior of patients in the clinic?**

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Low Vision Aids Practice

Low Vision Aids Practice is a book that helps students prepare for exams effectively. The book also provides guidelines for practitioners to establish and build their practices in the area of low vision management. Each chapter is an attempt to savor one concept that has been written succinctly and has been provided with multiple-choice questions and self-practice questions.

"A very simple book on low vision that helps in last-minute exam preparation."
—Optometry Students

"An interesting book... the most substantial book about low vision."
— Practicing Optometrists

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