

Module: **Visual Conditions and Functional Vision:
Early Intervention Issues**

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Overview

Families and other members of the early intervention team typically view teachers of children with visual impairments (TVIs) and orientation and mobility specialists (OMS) as experts on issues related to visual conditions that impact development and learning. In addition, team members expect TVIs and OMS to be knowledgeable about the implications of visual conditions, including how the visual condition impacts children's functioning in daily routines and activity settings. Consequently, TVIs and OMS must continuously seek out accurate and current information about the most prevalent visual conditions in young children with visual impairments. Furthermore, TVIs must know how to access information and resources about relatively rare visual conditions. TVIs and OMS must also be able to work collaboratively with eye care professionals, families, and other early intervention team members to conduct functional vision and age-appropriate learning media assessments and to use the results of these assessments to plan and implement intervention that will facilitate the child's optimal use of vision and other senses in the context of natural learning opportunities and daily routines.

Information from the fields of pediatric ophthalmology, visual impairments, early intervention, and developmental psychology have been synthesized in five sessions of this module that are listed below. The objectives for each of the five sessions are then provided as a framework for understanding the organization of this entire module, *Visual Conditions and Functional Vision: Early Intervention Issues*.

Session 1: Working With Families and Eye Care Professionals

Irene Topor, Ph.D.
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L. Penny Rosenblum, Ph.D.

Introduction

Welcome to Session 1, “Working With Families and Eye Care Professionals,” of the *Visual Conditions and Functional Vision: Early Intervention Issues* module. In this session, participants will acquire knowledge and skills that will enable them to work collaboratively with families, eye care specialists, and early intervention team members. In addition, participants will identify roles of various eye care specialists and learn how to support and prepare families for their interactions with eye care specialists.

Objectives

After completing this session, participants will

1. compare and contrast the roles of different eye care professionals.
2. describe the components of an eye care examination and information families should expect to receive following the exam.
3. describe strategies that teachers of young children with visual impairments (TVIs) use to support families who seek to understand their children’s visual diagnoses.
4. discuss factors such as learning styles and language and cultural barriers that affect families’ abilities to access and understand information and describe strategies for providing support to overcome these barriers.
5. describe strategies for facilitating interactions and communication between eye care specialists and families.
6. describe the role of TVIs when working with eye care specialists and other professionals using the transdisciplinary model.

Session 2: Visual Capacity

Irene Topor, Ph.D.
Deborah D. Hatton, Ph.D.
L. Penny Rosenblum, Ph.D.

Introduction

In Session 2, “Visual Capacity,” of the *Visual Conditions and Functional Vision: Early Intervention Issues* module, participants will acquire knowledge about visual structures, visual development, and factors that influence visual function in young children with and without visual impairments. *Visual capacity* refers to the potential that each child has for visual function.

Objectives

After completing this session, participants will

1. discuss the importance of vision for typical development.
2. describe typical vision development prenatally, at birth, and during the first two years of life.
3. describe how prematurity and atypical development of particular ocular structures may result in visual disorders that may limit visual capacity and result in atypical visual development.
4. describe physiological and environmental variables that may affect the child's visual function.

Session 3: Visual Conditions in Infants and Toddlers

Deborah D. Hatton, Ph.D.
Irene Topor, Ph.D.
L. Penny Rosenblum, Ph.D.

Introduction

In Session 3, “Visual Conditions in Infants and Toddlers,” of the *Visual Conditions and Functional Vision: Early Intervention Issues* module, participants will learn about the most prevalent visual conditions in infants and toddlers with severe visual impairments and their causes and characteristics. In addition, participants will consider the implications of particular visual conditions for early intervention while gaining skills in accessing resources about particular visual conditions.

Objectives

After completing this session, participants will

1. identify the most prevalent visual conditions found in young children with severe visual impairments in the United States and how they differ from those found in adults.
2. identify the three most prevalent eye conditions—cortical visual impairment, retinopathy of prematurity, and optic nerve hypoplasia—in young children with visual impairments. Describe the causes and characteristics of each condition as well as the implications for early development and intervention.
3. discuss the causes, characteristics, and implications of the following visual conditions: structural abnormalities—anophthalmia, microphthalmia, coloboma; albinism; retinal disorders such as retinoblastoma and Leber’s congenital amaurosis; congenital cataracts; and delayed visual maturation.
4. describe the characteristics of and implications of the following conditions that may occur as primary or secondary diagnoses—strabismus, amblyopia, glaucoma, nystagmus, and refractive errors.

Session 4: Functional Vision Assessment and Developmentally Appropriate Learning Media Assessment

Irene Topor, Ph.D.

L. Penny Rosenblum, Ph.D.

Deborah D. Hatton, Ph.D.

Introduction

Welcome to Session 4, “Functional Vision Assessment and Developmentally Appropriate Learning Media Assessment,” of the Visual Conditions and Functional Vision: Early Intervention Issues module. In this session, participants will acquire knowledge and skills that will enable them to conduct appropriate functional vision assessments (FVA) and developmentally appropriate learning media assessments (DALMA) for infants and toddlers. In addition, participants will become familiar with a process by which clinical eye exams, FVA, and DALMA assessment results can be used to develop recommendations and intervention strategies that promote optimal use of vision.

Objectives

After completing this session, participants will

1. describe the rationale and purposes for the functional vision assessments (FVA) for young children with visual impairments.
2. describe the step-by-step process of conducting an FVA with a young child.
3. identify and describe formal and informal tools and procedures that can be utilized as part of the FVA process.
4. describe the importance of, and the procedures used in, assessing various visual abilities as part of the FVA process.
5. describe developmental and environmental issues that can impact interpretation of FVA results.
6. describe the purpose of developmentally appropriate learning media assessments (DALMA) for young children with visual impairments, how to complete such assessments, and how results can be used to plan intervention.
7. recognize that the results of the clinical eye exam, FVA, and DALMA are the basis for developing a comprehensive intervention plan.
8. summarize the results of the FVA and DALMA in a professional, family-friendly report.

Session 5: Using Assessment Results in Intervention

Irene Topor, Ph.D.
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Deborah D. Hatton, Ph.D.

Introduction

In Session 5, “Using Assessment Results in Intervention,” of the *Visual Conditions and Functional Vision: Early Intervention Issues* module, participants will acquire knowledge and skills that will enable them to use the functional vision assessment (FVA) and/or the developmentally appropriate learning media assessment (DALMA) as the basis for identifying the child’s current level of sensory functioning. The current level of functioning will guide the development and implementation of functional intervention goals. In addition, participants will identify resources and strategies to promote the child’s optimal use of vision within the context of daily routines and naturally occurring learning opportunities to achieve these goals.

Objectives

After completing this session, participants will

1. recognize that intervention planning for young children with visual impairments should be based upon results from the functional vision assessment and/or developmentally appropriate learning media assessment; family concerns, resources, and priorities; and assessment results from multiple disciplines.
2. identify developmentally appropriate and functional interventions within the child's natural environment that facilitate the development of visual skills.
3. describe the relationship between postural stability and optimal use of vision, and describe the use of positioning to facilitate the use of vision.
4. identify environmental modifications that promote young children's optimal use of vision within the context of daily routines and naturally occurring activity settings.
5. describe the use of cues and prompts as an intervention strategy that may promote optimal vision use for children with visual impairments.
6. describe the TVI's role in supporting the use of corrective lenses with children with visual impairments.
7. describe the role of the TVI in implementing the recommendations from low vision specialists and in helping children learn how to use optical devices recommended by low vision specialists.
8. describe the relevance of a patching (penalization) program and strategies to support young children in adapting to penalization.
9. identify strategies that support efficient use of vision in children with cortical visual impairments.