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Introduction To Early Intervention

By Jessica McMurdie OTR/L

Learning Outcomes

1) Identify the 5 guiding principles for Early Intervention.
2) Identify the 5 steps in the IFSP process.
3) Identify the primary occupations and outcomes for infants and toddlers.
4) Describe the role of OT in EI
5) Summarize the key infant motor milestones.
6) Summarize the influence of sensory processing in the occupations of infants/toddlers.
Jessica McMurdie OTR/L

Education
• Occupational Therapy and Spanish (2000)

Certifications
• Sensory Integration
• Feeding

Owner and Clinical Director
Stepping Stones Therapy Network, Bellevue WA

Published Author
The OT Manager, 6th Ed. 2019
Contributing Author

4 National Small Business and OT Awards
1. AOTA Leadership Program
   Selected as 1 of 15 OTs in the U.S.
2. National SCORE Small Business Award 2012
3. SBA Emerging Leaders Class of 2016
4. Washington State OT and OT Assistant Award

Advocate for the OT profession
Testifying on behalf of patient access to OT and mitigating barriers to insurance in WA state.

Featured In
• Puget Sound Business Journal
• OT Practice Magazine “Practitioners in the News” 2016
• Rehab Management Magazine Podcast Guest 2015

Jessica has 20 years of pediatric experience.

www.steppingstones-ot.com

www.playitforwardtherapy.com
The Early Intervention Model

- To provide services to families that support infant and toddler overall well-being and development.
- Multi-disciplinary programs that rely upon close coordination and collaboration between educators, therapists, parents/caregivers.
- Parent education, coaching and therapy services (OT, PT, SLP) in “natural environments”.
- Free community screenings and follow up assessment to identify at risk children.

Guiding Principles For Early Intervention

- AOTA endorses the following principals from the National Early Childhood Technical Assistance Center (2007)
- The following principles are what make early intervention a unique and special setting!
Guiding Principle 1

Infants and toddlers learn best through every day experiences and interactions with familiar people in familiar contexts.

Guiding Principle 2

All families with the necessary supports and resources can enhance their children’s learning and development.

Set families up for success!
Guiding Principle 3

The early intervention process, from initial contacts through transition, must be dynamic and individualized to reflect the child’s family member’s preferences, learning styles, and cultural beliefs.

Guiding Principle 4

IFSP OUTCOMES

Individualized Family Service Plan Outcomes must be functional and based on children’s and families’ needs and priorities.

Provide family centered care
Guiding Principle 5

Interventions with young children and family members must be based on…
- Explicit principles
- Validated practices
- Best available research
- Relevant laws & regulations

Individuals with Disabilities Education Improvement Act (IDEA)

IDEA is a federal law that mandates all states to provide all children, including those with disabilities, access to a free, appropriate, public education.

- Part C of IDEA provides funding for early intervention services for at risk infants and toddlers from birth up until age 3.
EI services must occur in “natural environments” (home and community settings such as school or childcare).

Each state has its own regulations and requirements for the delivery of E.I. Services.

**Steps in the EI Process**

1. **Step 1** Identification and Referral of children at risk
2. **Step 2** Assessment by a multi-disciplinary team
3. **Step 3** Parental Consent
4. **Step 4** Individualized Family Service Plan (IFSP), reviewed every 6 months
5. **Step 5** Transition out of EI services or transitioning to an Individualized Education Program (IEP) upon turning 3 years old.
Step 1: Identification and Referral

Referral Sources
- Physicians
- Hospitals
- Parents
- Teachers
- Child Find Program through local school district

Step 2: Multi-Disciplinary Assessment

- Typical assessments are holistic and best for measuring the child’s behavior and performance in typical activities.
- Educator, OT, PT and SLP may all be present with the family and child during the evaluation.
- The purpose is to generate family centered goals or “Outcomes” based upon each team member’s assessment and parent input.
Common EI Assessments

The assessments below are examples that address Adaptive, Cognitive, Social Emotional, Communication and Motor domains.

- **Developmental Assessment of Young Children (DAYC-2):** Ages birth to 5 yrs.

- **Bayley Scales of Infant and Toddler Development:** Ages 1 to 42 months

Other Assessments

- **PDMS-2: Peabody Developmental Motor Scales-** Includes subtests for reflexes, gross and fine motor skills for children ages birth- 5 years

  - **Infant Sensory Profile 2**
    - Caregiver questionnaire for babies from Birth–6 months

  - **Toddler Sensory Profile 2**
    - Caregiver questionnaire for toddlers ages 7–35 months

- **DECA: Devereaux Early Childhood Assessment**
  - Social emotional skills for infants and toddlers ages 1-36 months
Step 3: Parental Consent

Parent collaboration requires clear communication at the IFSP meeting and beyond.

Step 4: The IFSP

Individualized Family Service Plan
✓ Determine eligibility
✓ An IFSP is like a Plan of Care, however instead of Goals, you have “Outcomes”
✓ Outcomes may be broken up into smaller intervention goals.
✓ The report should be written in parent-friendly language.
8 Tips for Writing High Quality Outcomes

1. Base the outcome on information from the initial evaluation and ongoing assessment.
2. Be sure to include the family’s priorities and most urgent concerns.
3. Make it functional and meaningful to the family’s life, activities and routines.
4. Use real life contexts that include developmental domains (not discipline specific).
5. Use jargon-free, every day language.
6. Emphasizes the positive or the “wanted behavior”, not the negative.
7. Use active words (e.g. sit, walk, talk, hold) with the child or family member’s name.
8. Avoid using vague, passive words (e.g. increase, decrease)

(Resource ETCA, 2014)

Outcome Examples for OT

- Gracie will hold her sippy cup with both hands so she can drink by herself when thirsty.
- Erik will remain seated in his stroller or shopping cart when at the grocery store.
- Max will play in the backyard while getting around with his walker.
- Maddy will sleep through the night.
The daily occupations of infants and toddlers can be summarized into 6 main areas.

- Motor
- Adaptive
- Cognitive
- Communication
- Social Emotional
- Play

What is the role of the OT in each of these areas?
OTs Role in Early Intervention

- Promote function and engagement of infants and toddlers with their families in every day activities.
- Collaborate with the child’s family to build on the family’s strengths, daily routines and interests.
- Provide treatment that focuses on activities of daily living, rest/sleep, developmental milestones, play skills, cognitive and social development.
- Have knowledge of how to incorporate other developmental strategies to enhance the child’s participation.

Motor

- Functional gross and fine motor skills
- The OT may be called a “Motor Therapist”
- OTs must know how to facilitate strength, endurance and coordination for both gross motor and fine motor skills.
- Use the furniture and household items the family already has to practice motor skills.
Tummy Time

Basic Motor Milestone Markers

- Reflexes (presence and integration)
- 0-3 m: Prone/Supine, hands to midline/mouth
- 4-6 m: Rolling, reaching, transfers toy
- 7-9 m: Sitting independently, picks up small objects using thumb and fingers, creeping, crawling, transitional movements
- 10-12 m: Standing, cruising along furniture, puts objects in and takes them out of containers
- 13-18 m: Walks independently, squats to pick up toy, pincer grasp, stacks 2 blocks
Adaptive

Age appropriate daily routines
- Feeding & eating
- Dressing
- Washing
- Grooming
- Sleeping
- The role of OT is to learn more about the family's routines and how to incorporate strategies into every day activities.

Cognitive

The OT must understand typical cognitive milestones which impact
- Learning
- Behavior
- Motor planning
- Problem Solving
- Play skills

Problem solving in the pantry
Pretend play
Communication

Engagement, speech & language, social communication

The OT's role includes learning how to…

- Engage infants and toddlers in joyful interactions
- Communicate with pre-verbal and non-verbal children using other modes of communication (e.g. visual schedules, sign language, consulting with SLP for AT).
- Use clear, sensitive and positive communication for a successful parent/therapist partnership.

(Joyful) Play!

The OT's role is important for:

- Encouraging positive parent and child interactions
- Teaching age appropriate social skills such as turn taking
- Playing with peers
- Using toys and materials functionally and creatively
Social Emotional

- Infant mental health
- Attachment
- Engagement
- Learning to cope with disappointment or failure

The 8 Sensory Systems

1. Visual
2. Auditory
3. Tactile
4. Olfactory
5. Gustatory
6. Proprioceptive: body awareness & deep pressure touch
7. Vestibular: balance, movement & position in space
8. Interoceptive: internal sensations such as hunger, sleep rhythms, toileting
Sensory Processing

Sensory integration problems result from neurological differences in how the brain and nervous system are wired.

Autonomic Nervous System (ANS)

**Sympathetic Nervous System**
- Survival or Protective Mode
- The physiological function is fight, flight or freeze

**Parasympathetic Nervous System**
- Resting state, slowing of heart beat, decrease in respiration, relaxed muscles
Preemies Unique Sensory Tendencies

- May be highly sensitive to noise, light touch and movement—even beyond the second birthday
- Retain startle reflexes longer than usual
- Have muscles that tend to be either stiff or floppy, or a mix of both. (Abnormal muscle tone in preemies often resolves itself by 12-18 months.)
- Be very distractible and highly active—or extremely quiet and sleep more than expected
- Have increased risk for vision problems
- Feeding: Often develop oral defensiveness because of negative oral experiences with feeding tubes, respirators and suctioning. Abnormal muscle tone inside the mouth may also contribute to feeding difficulties.
- Sensory based difficulties often resolve as the baby’s nervous system matures.

(Reference: Biehl, 2018)
Big Challenges for Tiny Tots

How does sensory processing impact the daily routines and activities for infants and toddlers?

Sensory processing challenges impact learning and early relationships

Cognitive impact
- If a toddler is unable to process sensory input adaptively and efficiently, the autonomic nervous system is in a state of “fight, flight or freeze” (sympathetic) at the brain stem level.
- In contrast, when the nervous system is calm (parasympathetic), the higher levels of the midbrain and cortex can focus on learning.

Social Emotional Impact
- If a child does not feel secure, safe or have a healthy social emotional attachment with a caregiver this impacts his/her ability to successfully co-regulate with a caregiver.
- This is an important factor in the development of self-regulation and infant mental health.
Motor

Proprioception
  - Body awareness
  - Deep pressure touch

Vestibular
  - Balance and position in space

Tactile discrimination

Adaptive

Sleeping + Routines
  - Proprioceptive/Vestibular
  - Auditory/Visual
  - Interoception

Sensory-based feeding problems
  - Tactile: texture, temperature
  - Gustatory: taste
  - Olfactory: smell

Toilet Training
  - Interoception
  - Tactile
  - Olfactory
Play Skills

Visual processing
- Visual attention
- Discrimination

Auditory processing
- Discrimination
- Communication

Proprioceptive/Vestibular
- To manipulate toys
- Grading of force/grasp (crayons, utensils)
- Gross motor games
- Motor planning and imitation

Communication

Visual processing
- Engagement
- Eye contact

Auditory processing
- Discrimination (receptive language)
- Over or under-responsive
- Impacts speech development

Oral motor
- Proprioception
- Speech articulation (expressive language)
Summary of Learning

- Early Intervention guiding principles and IFSP process
- How to write awesome outcomes
- The role of the OT working with infants, toddler and their families.
- Major motor milestones
- The influence of sensory processing on early childhood occupations

Questions?

Jessica McMurdie OTR/L

E-mail: jessica@playitforwardtherapy.net
or
Connect with me

www.playitforwardtherapy.net

https://www.facebook.com/steppingstonesot
References:

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